

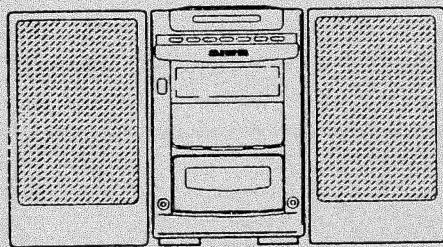
SERV. 33733

aiwa



LCX-700M

S E R V I C E M A N U A L



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM : 2ZM-1R4
- BASIC CD MECHANISM : 4ZG-2AC77

- TYPE: HE, HK, HR, LH, U, G, EE, K, EZ

SYSTEM	CD-CASSEIVER	SPEAKER	REMOTE CONTROLLER
LCX-700M	CX-SL700M	SX-SL700	RC-T515

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SPECIFICATIONS

<FM Tuner section>	
Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(HF)	Except EE, K, EZ: 13.2 dBf (1.3 μ V, 75 ohms) EE, K, EZ: 17.2 dBf (2.0 μ V, 75 ohms)
Antenna terminals	75 ohms (unbalanced)
<AM (MW) Tuner section>	
Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 μ V/m
Antenna	Loop antenna
<LW Tuner section>(EE, K, EZ only)	
Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 μ V/m
Antenna	Loop antenna
<Amplifier section>(Except U)	
Power output	(without connecting to the SURROUND SPEAKERS) HE, HK, LH, G: 15 W + 15 W (6 ohms, T.H.D. 10%) HR: Rated: 12 W + 12 W (6 ohms, T.H.D. 1%) Reference: 15 W + 15 W (6 ohms, T.H.D. 10%) EE, K, EZ: Rated: 12 W + 12 W (6 ohms, T.H.D. 1%, 1 kHz / DIN 45500) Reference: 15 W + 15 W (6 ohms, T.H.D. 10%, 1 kHz / DIN 45324) DIN MUSIC POWER: 32 W + 32 W
Total Harmonic distortion	0.1% (7.5 W, 1 kHz, 6 ohms)
<Amplifier section>(U only)	
Power output	FTC RULE 12 watts per channel minimum RMS, both channels driven, at 6 ohms. From 70 Hz to 20 kHz with no more than 1% Total Harmonic Distortion 0.1% (7.5 W, 1 kHz, 6 ohms)
Total Harmonic distortion	0.1% (7.5 W, 1 kHz, 6 ohms)
<Cassette deck section>	
Track format	4 tracks, 2 channels stereo
Frequency response	CrO ₂ tape: 50 Hz - 16000 Hz Normal tape: 50 Hz - 15000 Hz 48 dB (CrO ₂ tape)
Signal-to-noise ratio	AC bias
Recording system	Recording/playback/erase head x 1
Heads	
<Compact disc player section>	
Laser	Semiconductor laser (λ =780 nm)
D/A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.03% (1 kHz, 0 dB)
Wow and flutter	Unmeasurable
<Speaker system SX-SL700>	
Cabinet type	3 way, bass reflex (Magnetic sealed type)
Speaker	Woofer: 100 mm (4 in.) cone type Super tweeter: 20 mm (3/4 in.) ceramic type Surround speaker (Tweeter): 60 mm (2 1/2 in.) 6 ohms Surround speakers: 16 ohms
Impedance	
Output sound pressure level	86 dB/W/m
Dimensions (W x H x D)	165 x 286 x 245 mm (6 1/2 x 11 3/4 x 9 1/2 in.)
Weight	3.0 kg (6 lbs 10 oz.)
<General>	
Power requirements	HE, HK, HR, LH: 120 V / 220 - 240 V AC, switchable 50/60 Hz U: 120 V AC, 60 Hz G, EE, K, EZ: 230 V AC, 50 Hz
Power consumption	HE, HK, HR, LH, G: 60 W U: 50 W EE, K, EZ: 105 W
Dimensions of main unit	180 x 289.5 x 329.6 mm (7 1/4 x 11 1/2 x 13 in.)
Weight of main unit	5.0 kg (11 lbs.)

• Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen käytäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käytäjän turvallisuusluokan 1 yli-tavalleen näkymättömälle lasersäteilylle.

VARNING!
Om apparten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

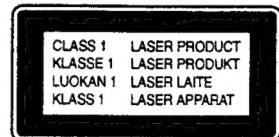
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

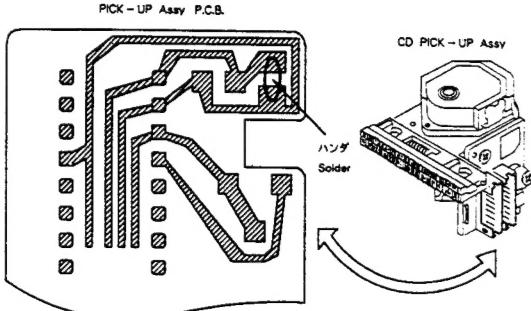


Precaution to replace Optical block

(KSS - 210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in figure below.



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C105	87-010-381-089	CAP,E 330-16 SME	
				C106	87-010-408-089	CAP,E 47-50 SME	
				C107	87-010-384-089	CAP,E 100-25 SME	
				C108	87-010-384-089	CAP,E 100-25 SME	
				C109	87-010-263-089	CAP,E 100-10 SME 5X11	
				C112	87-010-237-089	CAP,E 1000-16	
				C113	87-010-403-089	CAP,E 3-3.50 SME	
				C115	87-012-368-089	C-CAP,S 0.1-50 F<G,E,EZ>	
				C116	87-012-140-089	C-CAP,S 470P-50 CH	
				C118	87-012-368-089	C-CAP,S 0.1-50 F<G,E,EZ>	
				C123	87-010-263-089	CAP,E 100-10 SME 5X11<D>	
				C123	87-010-401-089	CAP,E 1-50 SME	
				C214	87-010-401-089	CAP,E 1-50 SME	
				C215	87-010-181-089	C-CAP,S 1800P-50 B	
				C216	87-010-181-089	C-CAP,S 1800P-50 B	
				C217	87-010-405-089	CAP,E 10-50 SME	
				C218	87-010-405-089	CAP,E 10-50 SME	
				C223	87-010-260-089	CAP,E 47-25 SME	
				C224	87-010-260-089	CAP,E 47-25 SME	
				C225	87-016-130-089	CAP,E 47-25 KME<EXCEPT U>	
				C225	87-010-260-089	CAP,E 47-25 SME<D>	
				C226	87-015-130-089	CAP,E 47-25 KME<EXCEPT U>	
				C226	87-010-260-089	CAP,E 47-25 SME<D>	
				C227	87-010-193-089	C-CAP,S 0.033-25 P	
				C228	87-010-193-089	C-CAP,S 0.033-25 F	
				C231	87-018-205-089	CAP,TC-D 0.022-25 F<K,EE,EZ>	
				C232	87-018-205-089	CAP,TC-D 0.022-25 F<K,EE,EZ>	
				C236	87-016-148-089	CAP,E 47-50 KME<EXCEPT U>	
				C236	87-010-408-089	CAP,E 47-50 SME<D>	
				C237	87-010-197-089	C-CAP,S 0.01-25 B<K,EE,EZ>	
				C238	87-010-197-089	C-CAP,S 0.01-25 B<K,EE,EZ>	
				C243	87-010-154-089	C-CAP,S 10P-50CH<EXCEPT K,EE,EZ>	
				C243	87-010-314-089	C-CAP,S 22P-50 CH<K,EE,EZ>	
				C244	87-018-147-089	CAP,TC-D 10P-50CH<EXCEPT K,EE,EZ>	
				C244	87-018-109-089	CAP,TC-D 22P-50 SL<K,EE,EZ>	
				C245	87-010-194-089	C-CAP,S 0.047-25 F	
				C247	87-010-198-089	C-CAP,S 0.022-25 B	
				C248	87-010-198-089	C-CAP,S 0.022-25 B	
				C251	87-010-196-089	C-CAP,S 0.1-25 F	
				C252	87-018-209-089	CAP,TC-D 0.1-50 CH	
				C253	87-010-196-089	C-CAP,S 0.1-25 F<K,EE,EZ>	
				C313	87-012-198-089	C-CAP,S 0.022-25 B	
				C315	87-010-374-089	CAP,E 47-10	
				C316	87-010-374-089	CAP,E 47-10	
				C351	87-012-154-089	C-CAP,S 15P-50 CH	
				C352	87-012-154-089	C-CAP,S 15P-50 CH	
				C353	87-012-140-089	C-CAP,S 470P-50 CH	
				C354	87-012-140-089	C-CAP,S 470P-50 CH	
				C355	87-012-154-089	C-CAP,S 15P-50 CH	
				C356	87-012-154-089	C-CAP,S 15P-50 CH	
				C357	87-010-189-089	C-CAP,S 8200P-50 B	
				C358	87-010-189-089	C-CAP,S 8200P-50 B	
				C361	87-010-197-089	C-CAP,S 0.01-25 B	
				C362	87-010-197-089	C-CAP,S 0.01-25 B	
				C403	87-012-154-089	C-CAP,S 15P-50 CH	
				C404	87-012-154-089	C-CAP,S 15P-50 CH	
				C405	87-012-140-089	C-CAP,S 470P-50 CH	
				C406	87-012-140-089	C-CAP,S 470P-50 CH	
				C407	87-015-826-089	C-CAP,S 1200-50 BK	
				C408	87-010-179-089	C-CAP,S 1200P-50 B	
				C409	87-010-213-089	C-CAP,S 0.015-50 B	
				C410	87-010-213-089	C-CAP,S 0.015-50 B	
				C411	87-010-178-089	C-CAP,S 1000P-50 B	
				C412	87-010-178-089	C-CAP,S 1000P-50 B	
				C413	87-010-402-089	CAP,E 2.2-50 SME	
				C414	87-010-402-089	CAP,E 4.7-50 SME	
				C415	87-010-404-089	CAP,E 4.7-50 SME	
				C416	87-010-404-089	CAP,E 4.7-50 SME	
				C451	87-012-156-089	C-CAP,S 220P-50 CH	
				C452	87-012-156-089	C-CAP,S 220P-50 CH	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION																																																																																																																																						
C453	87- 010-178-089	C-CAP.S 1000P-50 B	C772 87-010-194-089 C-CAP.S 0.047-25 F	C773 87-010-196-089 C-CAP.S 0.1-25 F	C774 87-010-263-089 C-CAP.E 100-10 SME 5X11	C775 87-010-405-089 C-CAP.E 10-50 SME	C776 87-015-819-089 CHIP CAP 0.01	L832 87-003-098-089 COIL, 2.2UH	L941 87-006-208-019 COIL, ANT LW<K,EE,EZ>	L942 87-007-305-019 COIL, OSC LW S<K,EE,EZ>	L981 82-NT3-632-019 AM PACK 1, SAG<EXCEPT K,EE,EZ>	C801 87-010-384-049 CAP.E 100-25 SME	CON105 88-802-091-529 CONN ASSY. 9P																																																																																																																																								
C454	87- 010-178-089	C-CAP.S 1000P-50 B<K,EE,EZ>	C777 87-010-400-089 C-CAP.E 0.47-50 SME	C778 87-010-401-089 C-CAP.E 1-50 SME	C779 87-010-401-089 C-CAP.E 1-50 SME	C780 87-010-197-089 C-CAP.S 0.01-25 B	C781 87-010-401-089 C-CAP.S 2700P-50 B	R105 87-022-050-089 RESIS, METAL 1W-0.22J	R106 87-022-050-089 RESIS, METAL 1W-0.22J	R591 87-010-312-089 C-CAP.S 15P-50 CB<K,EE,EZ>	R592 87-010-312-089 C-CAP.S 15P-50 CH<K,EE,EZ>	RY101 87-045-382-019 RELAY, OUT2-SH-112L	FT104 88-907-281-119 FF-CABLE, 7P 1.25	J501 82-NF7-630-019 JACK, 3.5 MO	FL101 85-CF5-650-019 FL-BT-179K	FT103 88-918-451-219 FF-CABLE, 18P 1.25																																																																																																																																					
C455	87- 010-177-089	C-CAP.S 820P-50SL<EXCEPT K,EE,EZ>	C776 87-015-819-089 CHIP CAP 0.01	C777 87-010-400-089 C-CAP.E 0.47-50 SME	C778 87-010-401-089 C-CAP.E 1-50 SME	C779 87-010-401-089 C-CAP.E 1-50 SME	C780 87-010-197-089 C-CAP.S 0.01-25 B	C781 87-010-401-089 C-CAP.S 2700P-50 B	R105 87-022-050-089 RESIS, METAL 1W-0.22J	R106 87-022-050-089 RESIS, METAL 1W-0.22J	R591 87-010-312-089 C-CAP.S 15P-50 CB<K,EE,EZ>	R592 87-010-312-089 C-CAP.S 15P-50 CH<K,EE,EZ>	RY101 87-045-382-019 RELAY, OUT2-SH-112L	FT104 88-907-281-119 FF-CABLE, 7P 1.25	J501 82-NF7-630-019 JACK, 3.5 MO	FL101 85-CF5-650-019 FL-BT-179K	FT103 88-918-451-219 FF-CABLE, 18P 1.25																																																																																																																																				
C456	87- 010-260-089	CAP.E 47-25 SME	C782 87-010-401-089 C-CAP.E 1-50 SME	C783 87-012-365-089 C-CAP.S 0.027-25 BK<EXCEPT U,LE>	C785 87-010-427-089 C-CAP.S 0.039-25 F<G,LR>	C786 87-012-365-089 C-CAP.S 0.027-25 BK<EXCEPT U,LE>	C786 87-010-427-089 C-CAP.S 0.039-25 F<G,LE>	SFR451 87-024-175-089 SFR, 4K DI6 V	SFR452 87-024-175-089 SFR, 4K DI6 V	SFR722 87-024-171-089 SFR, 4.7K DI6 V	TC721 87-011-253-089 TRIMMER, 30P LAR	TC942 87-011-253-089 TRIMMER, 30P LAR<K,EE,EZ>	LED404 87-070-431-080 LED, SEL4214R TP5	LED405 87-017-368-080 LED, SEL4514C TP5	LED406 87-017-368-080 LED, SEL4514C TP5	LED407 87-070-431-080 LED, SEL4214R TP5	LED408 87-017-368-080 LED, SEL4514C TP5																																																																																																																																				
C457	87- 010-197-089	C-CAP.S 0.01-25 B	C787 87-010-186-089 C-CAP.S 4700P-50 B<G,LE>	C788 87-010-186-089 C-CAP.S 4700P-50 B<G,LE>	C791 87-010-401-089 CAP.E 1-50 SME	C792 87-010-180-089 C-CAP.S 1500P-50B<EXCEPT K,EE,EZ>	C792 87-010-182-089 C-CAP.S 2200P-50 B<K,EE,EZ>	W101 83-NEC-679-019 F-CABLE, 5P-2.5	X703 84-508-618-019 VIB, CER CSB 456 P15	X721 87-030-372-019 VIB, XTAL 7.2MHz	LED409 87-017-368-080 LED, SEL4514C TP5	LED410 87-070-431-080 LED, SEL4214R TP5	LED411 87-017-368-080 LED, SEL4514C TP5	LED412 87-017-368-080 LED, SEL4514C TP5	LED413 87-070-431-080 LED, SEL4214R TP5																																																																																																																																						
C521	87- 010-198-089	C-CAP.S 0.022-25 B	C788 87-010-401-089 C-CAP.E 1-50 SME	C789 87-010-403-089 C-CAP.E 3.3-50 SME	C790 87-010-403-089 C-CAP.E 3.3-50 SME	C791 87-010-196-089 C-CAP.S 0.1-25 F	C792 87-010-405-089 C-CAP.E 10-50 SME	FRONT C.B	C201 87-010-401-049 CAP.E 1-50 SME	C202 87-010-263-049 CAP.E 10-10	C203 87-010-370-049 CAP.E 330-6.3 SME	C204 87-010-196-089 C-CAP.S 0.1-25 F	C205 87-010-401-049 CAP.E 1-50 SME	LED414 87-070-198-089 LED, SLP736A-81-S-T1	LED415 87-070-198-089 LED, SLP736A-81-S-T1	LED416 87-070-198-089 LED, SLP736A-81-S-T1	LED417 87-070-198-089 LED, SLP736A-81-S-T1	LED418 87-070-198-089 LED, SLP736A-81-S-T1																																																																																																																																			
C522	87- 010-312-089	C-CAP.S 15P-50 CH	C791 87-010-197-089 C-CAP.S 0.01-25 B	C792 87-010-427-089 C-CAP.S 0.039-25 F<G,LE>	C793 87-010-189-089 C-CAP.S 8200P-50 B	C794 87-010-260-089 C-CAP.E 47-25 SME	C795 87-010-194-089 C-CAP.S 0.047-25 F	C796 87-010-403-089 C-CAP.E 3.3-50 SME	C797 87-010-405-089 C-CAP.E 10-50 SME	C206 87-010-196-089 C-CAP.S 0.1-25 F	C207 87-010-178-089 C-CAP.S 1000P-50 B	C208 87-010-075-049 CAP.E 10-16 5L	C209 87-010-246-049 CAP.E 47-35 SME	C210 87-015-688-049 CAP.E 4.7-35 7L	LED419 87-070-198-089 LED, SLP736A-81-S-T1	S301 87-036-397-089 SW, TACT SKQNB	S302 87-036-397-089 SW, TACT SKQNB	S303 87-036-397-089 SW, TACT SKQNB	S304 87-036-397-089 SW, TACT SKQNB																																																																																																																																		
C523	87- 010-197-089	C-CAP.S 0.01-25 B	C793 87-010-189-089 C-CAP.S 8200P-50 B	C794 87-010-260-089 C-CAP.E 47-25 SME	C795 87-010-194-089 C-CAP.S 0.047-25 F	C796 87-010-403-089 C-CAP.E 3.3-50 SME	C797 87-010-405-089 C-CAP.E 10-50 SME	C209 87-010-401-049 CAP.E 1-50 SME	C211 87-015-688-049 CAP.E 4.7-35 7L	C212 87-010-196-089 C-CAP.S 0.1-25 F	C213 87-010-314-089 C-CAP.S 22P-50 CH	C214 87-010-317-089 C-CAP.S 39P-50 CH	C215 87-010-317-089 C-CAP.S 39P-50 CH	S305 87-036-397-089 SW, TACT SKQNB	S306 87-036-397-089 SW, TACT SKQNB	S307 87-036-397-089 SW, TACT SKQNB	S308 87-036-397-089 SW, TACT SKQNB	S309 87-036-397-089 SW, TACT SKQNB																																																																																																																																			
C540	87- 010-196-089	C-CAP.S 0.1-25 F	C798 87-010-196-089 C-CAP.S 0.1-25 F	C799 87-015-785-089 C-CAP.S 0.1-25 F	C814 87-010-197-089 C-CAP.S 0.01-25 B	C816 87-010-196-089 C-CAP.S 0.1-25 F	C819 87-010-196-089 C-CAP.S 0.1-25 F	C216 87-010-196-089 C-CAP.S 0.1-25 F	C217 87-010-196-089 C-CAP.S 0.1-25 F	C218 87-010-196-089 C-CAP.S 0.1-25 F	C219 87-010-196-089 C-CAP.S 0.1-25 F	C220 87-015-688-049 CAP.E 4.7-35 7L	C221 87-015-688-049 CAP.E 4.7-35 7L	C222 87-010-196-089 C-CAP.S 0.1-25 F	C223 87-010-196-089 C-CAP.S 22P-50 CH	C224 87-010-317-089 C-CAP.S 39P-50 CH	C225 87-010-317-089 C-CAP.S 39P-50 CH	S305 87-036-397-089 SW, TACT SKQNB	S306 87-036-397-089 SW, TACT SKQNB	S307 87-036-397-089 SW, TACT SKQNB	S308 87-036-397-089 SW, TACT SKQNB	S309 87-036-397-089 SW, TACT SKQNB																																																																																																																															
C541	87- 010-196-089	C-CAP.S 0.1-25 F	C799 87-015-785-089 C-CAP.S 0.1-25 F	C814 87-010-197-089 C-CAP.S 0.01-25 B	C816 87-010-196-089 C-CAP.S 0.1-25 F	C819 87-010-196-089 C-CAP.S 0.1-25 F	C820 87-010-260-089 CAP.E 47-25 SME	C821 87-010-197-089 C-CAP.S 0.01-25 B	C822 87-010-197-089 C-CAP.S 0.01-25 B	C823 87-010-197-089 C-CAP.S 0.01-25 B	C826 87-010-197-089 C-CAP.S 0.01-25 B	C827 87-018-134-089 CAP.TC-U 0.01-16 Y<K,EE,EZ>	C216 87-015-785-089 C-CAP.S 0.1-25 F	C217 87-015-785-089 C-CAP.S 0.1-25 F	C218 87-010-196-089 C-CAP.S 0.1-25 F	C219 87-010-196-089 C-CAP.S 0.1-25 F	C220 87-010-196-089 C-CAP.S 0.1-25 F	C221 87-010-196-089 C-CAP.S 0.1-25 F	C222 87-010-196-089 C-CAP.S 0.1-25 F	C223 87-010-196-089 C-CAP.S 0.1-25 F	C224 87-010-196-089 C-CAP.S 0.1-25 F	C225 87-010-196-089 C-CAP.S 0.1-25 F	S310 87-036-397-089 SW, TACT SKQNB	S311 87-036-397-089 SW, TACT SKQNB	S312 87-036-397-089 SW, TACT SKQNB	S313 87-036-397-089 SW, TACT SKQNB	S314 87-036-397-089 SW, TACT SKQNB																																																																																																																										
C542	87- 010-404-089	CAP.E 4.7-50 SME	C820 87-010-260-089 CAP.E 47-25 SME	C821 87-010-197-089 C-CAP.S 0.01-25 B	C822 87-010-197-089 C-CAP.S 0.01-25 B	C823 87-010-197-089 C-CAP.S 0.01-25 B	C826 87-010-197-089 C-CAP.S 0.01-25 B	C827 87-018-134-089 CAP.TC-U 0.01-16 Y<K,EE,EZ>	C216 87-015-785-089 C-CAP.S 0.1-25 F	C217 87-015-785-089 C-CAP.S 0.1-25 F	C218 87-010-196-089 C-CAP.S 0.1-25 F	C219 87-010-196-089 C-CAP.S 0.1-25 F	C220 87-010-196-089 C-CAP.S 0.1-25 F	C221 87-010-196-089 C-CAP.S 0.1-25 F	C222 87-010-196-089 C-CAP.S 0.1-25 F	C223 87-010-196-089 C-CAP.S 0.1-25 F	C224 87-010-196-089 C-CAP.S 0.1-25 F	C225 87-010-196-089 C-CAP.S 0.1-25 F	C226 87-010-196-089 C-CAP.S 0.1-25 F	C227 87-010-196-089 C-CAP.S 0.1-25 F	C228 87-010-196-089 C-CAP.S 0.1-25 F	C229 87-010-196-089 C-CAP.S 0.1-25 F	C230 87-010-196-089 C-CAP.S 0.1-25 F	C231 87-010-196-089 C-CAP.S 0.1-25 F	C232 87-010-196-089 C-CAP.S 0.1-25 F	C233 87-010-196-089 C-CAP.S 0.1-25 F	C234 87-010-196-089 C-CAP.S 0.1-25 F	C235 87-010-196-089 C-CAP.S 0.1-25 F	C236 87-010-196-089 C-CAP.S 0.1-25 F	C237 87-010-196-089 C-CAP.S 0.1-25 F	C238 87-010-196-089 C-CAP.S 0.1-25 F	S315 87-036-397-089 SW, TACT SKQNB	S316 87-036-397-089 SW, TACT SKQNB	S317 87-036-397-089 SW, TACT SKQNB	S318 87-036-397-089 SW, TACT SKQNB	S319 87-036-397-089 SW, TACT SKQNB	S320 87-036-397-089 SW, TACT SKQNB	S321 87-036-397-089 SW, TACT SKQNB	S322 87-036-397-089 SW, TACT SKQNB	S323 87-036-397-089 SW, TACT SKQNB	S324 87-036-397-089 SW, TACT SKQNB	S325 87-036-397-089 SW, TACT SKQNB	S326 87-036-397-089 SW, TACT SKQNB	S327 87-036-397-089 SW, TACT SKQNB	S328 87-036-397-089 SW, TACT SKQNB	S329 87-036-397-089 SW, TACT SKQNB	S330 87-036-397-089 SW, TACT SKQNB	S331 87-036-397-089 SW, TACT SKQNB	S332 87-036-397-089 SW, TACT SKQNB	S333 87-036-397-089 SW, TACT SKQNB	S334 87-036-397-089 SW, TACT SKQNB	S335 87-036-397-089 SW, TACT SKQNB	S336 87-036-397-089 SW, TACT SKQNB	S337 87-036-397-089 SW, TACT SKQNB	S338 87-036-397-089 SW, TACT SKQNB	S339 87-036-397-089 SW, TACT SKQNB	S340 87-036-397-089 SW, TACT SKQNB	S341 87-036-397-089 SW, TACT SKQNB	S342 87-036-397-089 SW, TACT SKQNB	S343 87-036-397-089 SW, TACT SKQNB	S344 87-036-397-089 SW, TACT SKQNB	S345 87-036-397-089 SW, TACT SKQNB	S346 87-036-397-089 SW, TACT SKQNB	S347 87-036-397-089 SW, TACT SKQNB	S348 87-036-397-089 SW, TACT SKQNB	S349 87-036-397-089 SW, TACT SKQNB	S350 87-036-397-089 SW, TACT SKQNB	S351 87-036-397-089 SW, TACT SKQNB	S352 87-036-397-089 SW, TACT SKQNB	S353 87-036-397-089 SW, TACT SKQNB	S354 87-036-397-089 SW, TACT SKQNB	S355 87-036-397-089 SW, TACT SKQNB	S356 87-036-397-089 SW, TACT SKQNB	S357 87-036-397-089 SW, TACT SKQNB	S358 87-036-397-089 SW, TACT SKQNB	S359 87-036-397-089 SW, TACT SKQNB	S360 87-036-397-089 SW, TACT SKQNB	S361 87-036-397-089 SW, TACT SKQNB	S362 87-036-397-089 SW, TACT SKQNB	S363 87-036-397-089 SW, TACT SKQNB	S364 87-036-397-089 SW, TACT SKQNB	S365 87-036-397-089 SW, TACT SKQNB	S366 87-036-397-089 SW, TACT SKQNB	S367 87-036-397-089 SW, TACT SKQNB	S368 87-036-397-089 SW, TACT SKQNB	S369 87-036-397-089 SW, TACT SKQNB	S370 87-036-397-089 SW, TACT SKQNB	S371 87-036-397-089 SW, TACT SKQNB	S372 87-036-397-089 SW, TACT SKQNB	S373 87-036-397-089 SW, TACT SKQNB	S374 87-036-397-089 SW, TACT SKQNB	S375 87-036-397-089 SW, TACT SKQNB	S376 87-036-397-089 SW, TACT SKQNB	S377 87-036-397-089 SW, TACT SKQNB	S378 87-036-397-089 SW, TACT SKQNB	S379 87-036-397-089 SW, TACT SKQNB	S380 87-036-397-089 SW, TACT SKQNB	S381 87-036-397-089 SW, TACT SKQNB	S382 87-036-397-089 SW, TACT SKQNB	S383 87-036-397-089 SW, TACT SKQNB	S384 87-036-397-089 SW, TACT SKQNB	S385 87-036-397-089 SW, TACT SKQNB	S386 87-036-397-089 SW, TACT SKQNB	S387 87-036-397-089 SW, TACT SKQNB	S388 87-036-397-089 SW, TACT SKQNB	S389 87-036-397-089 SW, TACT SKQNB	S390 87-036-397-089 SW, TACT SKQNB	S391 87-036-397-089 SW, TACT SKQNB	S392 87-036-397-089 SW, TACT SKQNB	S393 87-036-397-089 SW, TACT SKQNB	S394 87-036-397-089 SW, TACT SKQNB	S395 87-036-397-089 SW, TACT SKQNB	S396 87-036-397-089 SW, TACT SKQNB	S397 87-036-397-089 SW, TACT SKQNB	S398 87-036-397-089 SW, TACT SKQNB	S399 87-036-397-089 SW, TACT SKQNB	S400 87-036-397-089 SW, TACT SKQNB	S401 87-036-397-089 SW, TACT SKQNB	S402 87-036-397-089 SW, TACT SKQNB	S403 87-036-397-089 SW, TACT SKQNB	S404 87-036-397-089 SW, TACT SKQNB	S405 87-036-397-089 SW, TACT SKQNB	S406 87-036-397-089 SW, TACT SKQNB	S407 87-036-397-089 SW, TACT SKQNB	S408 87-036-397-089 SW, TACT SKQNB	S409 87-036-397-089 SW, TACT SKQNB	S410 87-036-397-089 SW, TACT SKQNB	S411 87-036-397-089 SW, TACT SKQNB	S412 87-036-397-089 SW, TACT SKQNB	S413 87-036-397-089 SW, TACT SKQNB	S414 87-036-397-089 SW, TACT SKQNB	S415 87-036-397-089 SW, TACT SKQNB	S416 87-036-397-089 SW, TACT SKQNB	S417 87-036-397-089 SW, TACT SKQNB	S418 87-036-397-089 SW, TACT SKQNB	S419 87-036-397-089 SW, TACT SKQNB	S420 87-036-397-089 SW, TACT SKQNB	S421 87-036-397-089 SW, TACT SKQNB	S422 87-036-397-089 SW, TACT SKQNB	S423 87-036-397-089 SW, TACT SKQNB	S424 87-036-397-089 SW, TACT SKQNB	S425 87-036-397-089 SW, TACT SKQNB	S426 87-036-397-089 SW, TACT SKQNB	S427 87-036-397-089 SW, TACT SKQNB	S428 87-036-397-089 SW, TACT SKQNB	S429 87-036-397-089 SW, TACT SKQNB	S430 87-036-397-089 SW, TACT SKQNB	S431 87-036-397-089 SW, TACT SKQNB	S4

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C53	87-010-196-089	C-CAP.S 0.1-25 F		LED424	87-070-432-080	LED,SEL4414G TP5	
C54	87-010-196-089	C-CAP.S 0.1-25 F		LED425	87-070-432-080	LED,SEL4414G TP5	
C57	87-010-197-089	C-CAP.S 0.01-25 B		LED426	87-070-432-080	LED,SEL4414G TP5	
C58	87-010-221-089	CAP,E 470-10		S322	87-036-397-089	SW,TACT SKQNAB	
C59	87-010-263-089	CAP,E 100-10 SME 5X11		S323	87-036-397-089	SW,TACT SKQNAB	
C60	87-010-197-089	C-CAP.S 0.01-25 B		S324	87-036-397-089	SW,TACT SKQNAB	
C61	87-010-263-089	CAP,E 100-10 SME 5X11		S325	87-036-397-089	SW,TACT SKQNAB	
C101	87-010-178-089	C-CAP.S 1000P-50 B		S326	87-036-397-089	SW,TACT SKQNAB	
C102	87-010-186-089	C-CAP.S 4700P-50 B		S327	87-036-397-089	SW,TACT SKQNAB	
C105	87-018-119-089	CAP,TC-U 100P-50 B		S328	87-036-397-089	SW,TACT SKQNAB	
C106	87-010-197-089	C-CAP.S 0.01-25 B		S329	87-036-397-089	SW,TACT SKQNAB	
C107	87-010-197-089	C-CAP.S 0.01-25 B		S330	87-036-397-089	SW,TACT SKQNAB	
C109	87-010-314-089	C-CAP.S 22P-50 CH					
C110	87-010-314-089	C-CAP.S 22P-50 CH					
C111	87-010-197-089	C-CAP.S 0.01-25 B					
		LED-1 C.B					
C112	87-015-819-089	CHIP CAP 0.01		D901	87-070-129-080	LED,SEL1450CEM	
C113	87-010-263-089	CAP,E 100-10 SME 5X11		D902	87-017-733-080	LED,SEL1250SM	
C114	87-018-134-089	CAP,TC-U 0.01-16 Y		D903	87-017-733-080	LED,SEL1250SM	
C115	87-010-263-089	CAP,E 100-10 SME 5X11		D904	87-070-129-080	LED,SEL1450CEM	
C116	87-010-404-089	CAP,E 4.7-50 SME					
C117	87-018-209-089	CAP,TC-U 0.1-50 F					
C121	87-010-263-089	CAP,E 100-10 SME 5X11					
C201	87-012-153-089	C-CAP.S 120P-50 CH					
C202	87-012-153-089	C-CAP.S 120P-50 CH					
C203	87-012-153-089	C-CAP.S 120P-50 CH					
C204	87-012-153-089	C-CAP.S 120P-50 CH		▲ 82-304-743-019	TERMINAL,1P		
C205	87-012-153-089	C-CAP.S 120P-50 CH		▲ 87-033-213-089	CLAMP FUSE SMK		
C206	87-012-153-089	C-CAP.S 120P-50 CH		▲ F901	87-035-362-019	FUSE,1A 250V TE<LH,HE,HK,BR>	
C207	87-012-153-089	C-CAP.S 120P-50 CH		▲ F901	87-035-359-019	FUSE,500mA 250V TE<K,EE,G,EZ>	
C208	87-012-153-089	C-CAP.S 120P-50 CH		▲ F901	87-035-411-019	FUSE,TIA 250V UL<U>	
C209	87-012-153-089	C-CAP.S 120P-50 CH		▲ PT101	85-CF5-648-019	PT,5CF-5 E<K,EE,EZ>	
C210	87-012-153-089	C-CAP.S 120P-50 CH		▲ PT101	85-CF5-647-019	PT,5CF-5 HR<R>	
C211	87-010-401-089	CAP,E 1-50 SME		▲ PT101	85-CF5-646-019	PT,5CF-5 HC<U,LH,HE,HK,G>	
C212	87-010-401-089	CAP,E 1-50 SME		▲ SW901	87-036-235-019	SW,SL ESD 269<LH,HE,HK,HR>	
C213	87-010-186-089	C-CAP.S 4700P-50 B					
C214	87-010-186-089	C-CAP.S 4700P-50 B					
C251	87-010-101-089	CAP,E 220-16 SME					
C252	87-010-263-089	CAP,E 100-10 SME 5X11					
C301	87-018-119-089	CAP,TC-U 100P-50 B					
C302	87-018-119-089	CAP,TC-U 100P-50 B					
C303	87-018-119-089	CAP,TC-U 100P-50 B					
C304	87-018-119-089	CAP,TC-U 100P-50 B					
C305	87-018-119-089	CAP,TC-U 100P-50 B					
C306	87-018-119-089	CAP,TC-U 100P-50 B					
C351	87-010-384-089	CAP,E 100-25 SME					
		RELAY C.B					
C352	87-010-197-089	C-CAP.S 0.01-25 B		CONN151	85-CF5-660-019	CONN ASSY,8P-RPB	
C353	87-010-197-089	C-CAP.S 0.01-25 B					
C354	87-010-197-089	C-CAP.S 0.01-25 B					
C402	87-010-197-089	C-CAP.S 0.01-25 B					
C403	87-010-404-089	CAP,E 4.7-50 SME					
		MOTOR-1 C.B					
C404	87-010-248-089	CAP,E 220-10 SME		M20	9X-262-513-210	SLED MOTOR ASSY	
C406	87-010-263-089	CAP,E 100-10 SME 5X11		M21	9X-262-513-210	SPINDLE MOTOR ASSY	
CON5	88-802-081-699	CONN ASSY,8P		PIN105	91-564-722-110	CONNECTOR 6P	
CON51	88-802-081-429	CONN ASSY,8P		SW1	91-572-085-110	LEAF SW	
FT101	88-906-201-119	FF-CABLE,6P 1.25					
FT102	88-914-141-119	FF-CABLE,14P 1.25					
LL	87-003-102-089	COIL,10WH					
SFR1	87-024-172-089	SFR,10K DIA6 V		C11	87-016-271-080	CAP,E 22-16 BP	
SFR2	87-024-176-089	SFR,100K DIA6 V		M11	87-045-383-010	MOT,M9I T2	
SFR3	87-024-176-089	SFR,100K DIA6 V					
SFR4	87-024-176-089	SFR,100K DIA6 V					
X101	87-030-221-089	CERALOCK 16.93MHZ					
		CONNECTOR C.B					
KEY C.B				C1	87-016-271-080	CAP,E 22-16 BP	
C402	87-010-196-089	C-CAP.S 0.1-25 F		C2	87-016-271-080	CAP,E 22-16 BP	
LED420	87-070-432-080	LED,SEL4414C TP5		M1	87-045-383-010	MOT,M9I T2	
LED421	87-070-432-080	LED,SEL4414C TP5		M2	87-045-383-010	MOT,M9I T2	
LED422	87-070-432-080	LED,SEL4414C TP5		SW2	87-036-109-010	SW,PUSH SPPB 61	
LED423	87-070-432-080	LED,SEL4414C TP5		SW3	87-036-252-010	SW,PUSH SPPB 51	
				W1	84-ZG2-610-010	F-CABLE 2.0-2P L=150	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SENSOR C.B			

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
LED C.B			

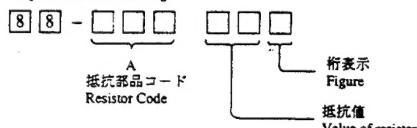
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
PH C.B			

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
PH21			

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
P-SNSR,GP1S53V			

○ チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions/寸法(mm)			Resistor Code: A 抵抗コード: A
				Form/外形	L	W	
1/32W	1608	±5%	CJ		1.6	0.8	0.35
1/10W	2125	±5%	CJ		2	1.25	1.45
1/8W	3216	±5%	CJ		3.2	1.6	0.5 -0.7

Pin No.	Pin Name	I/O	Description
1	GNDA	-	Analog ground terminal for D/A converter (Right channel).
2	RO	O	Right channel data forward output terminal.
3	RO	O	Right channel data reverse output terminal.
4	VDA	-	Analog power supply terminal for D/A converter (+5V).
5	LO	O	Left channel data reverse output terminal.
6	LO	O	Left channel data forward output terminal.
7	GNDA	-	Analog ground terminal for D/A converter (Left channel).
8	TEST3	I	Test terminal. Normally, keep at "H" level or open.
9	TEST4		
10	TEST5		
11	SBOK	O	Subcode Q data CRC check adjusting result output terminal. The adjusting result is OK at "H" level. (Not used)
12	VDDD	-	Digital supply voltage terminal (+5V).
13	GNDD	-	Digital ground terminal.
14~17	BUS0~BUS3	I / O	Command and data sending / receiving input / output terminals.
18	CCE	I	Command and data sending / receiving chip enable signal input terminal. The bus line becomes active at "L" level.
19	BUCK	I	Command and data sending / receiving clock input terminal.
20	PFCK	O	Regeneration system frame periodic signal output terminal (7.35kHz). (Not used)
21	RST	I	Reset input terminal. The internal system is reset at "L" level.
22	SUBSYC	O	Subcode sync signal output terminal. (Not used)
23	SUBD	O	Subcode P ~ W output terminals. (Not used)
24	CLK	I	Subcode P ~ W data readout clock input terminal.
25	VDDD	-	Digital supply voltage terminal (+5V).
26	GNDD	-	Digital ground terminal.
27	DFCT	O	Defect detection signal output terminal. VREF when defect is detected. Normally, HiZ. (Not used)
28	TEL2	O	Tracking gain adjusting analog switch output terminals. VREF or HiZ.
29	TEL1		
30	TGUL	O	Tracking servo loop low frequency phase compensator change-over analog switch output terminal. HiZ (gain up) when detecting shock. Normally, VREF.
31	TGUH2	O	Tracking servo loop middle / high frequency phase compensator change-over analog switch output terminals. HiZ (gain up) when detecting shock. Normally, VREF. TGUH1 is used at normal regeneration and TGUH2 is used at double speed regeneration.
32	TGUH1		
33	TKIC	O	Tracking actuator kick signal output terminal. Kicks in the outer circumferential direction at "H" level and in the inner circumferential direction at "L" level.
34	FMON	O	Feed servo ON / OFF analog switch output terminals. Servo on at "HiZ" and off at "VREF".
35	TEST1	I	Test terminal. Normally, keep at "H" level or open.

Pin No.	Pin Name	I/O	Description
36	FMFB	O	Feed motor FWD / BWD feeding control signal output terminal. Feed in the outer circumferential direction at "H" level and in the inner circumferential direction at "L" level.
37	TEST	I	Test terminal. Normally, keep at "H" level or open. (Not used)
38	DMON	O	Disc motor driving circuit gain change-over analog switch output terminal. Disc motor CLV servo AFC signal output terminal.
39	DMFO	O	COMMAND DMFC OUTPUT OPERATION ----- DMFK H Motor acceleration DMSV PWM CLV servo ON DMBK L Motor deceleration DMOFF VREF CLV servo OFF
40	DMPC	O	Disc motor CLV servo APC signal output terminal.
41	2VREF	I	Double times reference voltage input terminal (VREF X 2).
42	SEL	O	Servo mode indicating signal output terminal. SEL LD ON / OFF FOCUS SERVO OPERATION ----- L OFF OFF LD OFF HiZ ON OFF Focus Search H ON ON Normal play etc. Focus Servo ON: FOK
43	FCSI	O	Focus actuator driving signal output terminal in the focus search mode. COMMAND FCSI OUTPUT OPERATION ----- FORST H Lens gets far away from disc FOSET L Lens gets near disc Others HiZ Other than focus search
44	FKIC	O	Focus actuator driving signal output terminal in the focus gain adjusting mode. COMMAND FKIC OUTPUT OPERATION ----- FGASR H Lens gets far away from disc FGASS L Lens gets near disc Others HiZ Other than focus adjustment
45	FEL2	O	Focus gain adjusting analog switch output terminals. (Not used)
46	FEL1		
47	FEI	I	Focus error signal input terminal.
48	TESH	I	Tracking error signal input sample holding analog switch input terminal.
49	TEOF	O	Tracking servo operation ON / OFF analog switch output terminal. VREF when the tracking servo is OFF.
50	SBAD	I	Sub-beam adding signal input terminal.
51	RFRP	I	RF ripple signal input terminal.
52	VREF	I	Reference voltage input terminal (+2.1V).
53	RF1	I	RF signal input terminal.
54	GNDA	-	Analog ground terminal.
55	DTSC2	O	Data slice control EFM signal passive output terminal.

IC, TA2065F

Pin No.	Pin Name	I/O	Description
1	RFO	O	RF amplifier (RF AMP) output terminal.
2	RFI	I	RF ripple signal generating circuit input terminal.
3	VRO	O	VR amplifier output terminal.
4	2VRO	O	2VR amplifier output terminal.
5	RFRP	O	RF ripple signal output terminal.
6	SBAD	O	Defects detection signal output terminal.
7	DFIN	I	Defects detecting comparator positive phase input terminal. (Connected to SBAD)
8	FEP	I	Focus error balance adjusting input terminal.
9	FEN	I	Focus error amplifier (FE AMP) negative phase input terminal.
10	FEQ	O	Focus error amplifier (FE AMP) output terminal.
11	FEI	I	Focus output amplifier (FS AMP) positive phase input terminal.
12	FHLD	I	Hold switch terminal for defect.
13	FEL1	I	Focus gain adjusting terminal. (Not used)
14	FEL2		
15	FSN	I	Focus output amplifier (FS AMP) negative phase input terminal.
16	FSO	O	Focus output amplifier (FS AMP) output terminal.
17	COSC	O	Focus search signal generating capacitor connecting terminal.
18	OSCI	I	Focus search signal generating built-in current source control input terminal.
19	GND	-	Ground terminal.
20	VCC	-	Power source terminal (+5V).
21	SEL	I	Analog switch control signal input terminal.
22	DMEP	I	Disc motor amplifier (DM AMP) positive phase input terminal.
23	DMEN	I	Disc motor amplifier (DM AMP) negative phase input terminal.
24	DMEO	O	Disc motor amplifier (DM AMP) output terminal.
25	DFCT	I	Defect detecting comparator negative phase input terminal.
26	FMSO	O	Feed motor output amplifier (FMS AMP) output terminal.
27	FMSN	I	Feed motor output amplifier (FMS AMP) negative phase input terminal.
28	FMSP	I	Feed motor output amplifier (FMS AMP) positive phase input terminal.
29	THLD	I	Hold switch terminal for defect.
30	TS2O	O	Tracking servo amplifier 2 (TS2 AMP) output terminal.
31	TS2N	I	Tracking servo amplifier 2 (TS2 AMP) negative phase input terminal.
32	TS2P	I	Tracking servo amplifier 2 (TS2 AMP) positive phase input terminal.
33	TS1N	I	Tracking servo amplifier 1 (TS1 AMP) negative phase input terminal. (Not used)
34	TS1P	I	Tracking servo amplifier 1 (TS1 AMP) positive phase input terminal.
35	TSO	O	Tracking output amplifier (TS AMP) output terminal.
36	TEL1	I	Tracking gain adjusting terminal.
37	TEL2		
38	TSN	I	Tracking output amplifier (TS AMP) negative phase input terminal.
39	TPO	O	Sub-beam I-V amplifier output terminal.
40	TPI	I	Sub-beam I-V amplifier input terminal.
41	TNI		

NOTE : HIZ = High Impedance

IC, μ PD78044BGF-015

Pin No.	Pin Name	I/O	Description
1 ~ 7	O-G7 ~ O-G1	O	FL display grid output.
8	VDD	-	Connected to +5.6V.
9	IO-BUS3	I / O	CD IC control data bus input / output.
10	IO-BUS2		
11	IO-BUS1		
12	IO-BUS0		
13	I-STEREO / O-CCE	I / O	Tuner stereo detection input / CD IC control chip enable output.
14	I-TU / IFC / O-BUCK	I / O	Tuner / IF count data input / CD IC control data bus clock output.
15	O-PLLCE	O	PLL IC chip enable output.
16	I-HOLD	I	Power-down detection input. Backup mode at "L" input.
17	RESET	I	Reset input.
18	O-DATA (F / M)	O	Front main shift register / PLL data output.
19	O-CLK (F / M)	O	Front main shift register / PLL clock output.
20	AVSS	-	Connected to GND.
21	I-KEY1	I	Keys 1 AD input.
22	I-KEY2	I	Keys 2 AD input.
23	I-MIC	I	Mic level AD input for auto vocal fader.
24	I-MS	I	Cassette deck MS detection AD input.
25	I-CDSW1	I	CD mecha switch 1 AD input.
26	I-CDSW2	I	CD mecha switch 2 AD input.
27	I-DISC1	I	Disc sensor 1 AD input.
28	I-DISC2	I	Disc sensor 2 AD input.
29	AVDD	-	Connected to +5.6V.
30	AVREF		
31	I-TMBASE	I	Clock reference input (exclusive for 8MHz).
32	XT2	-	Sub-clock. (Not used)
33	VSS1	-	Connected to GND.
34	X1	-	4.19MHz oscillation circuit.
35	X2	-	
36	O-CSHIFT	O	Micro-computer clock shift output. (See table-1)
37	O-MOTOR	O	Deck motor ON / OFF output.
38	O-SOL	O	Deck plunger ON / OFF output.
39	O-STB	O	Shift register data latched strobe output.
40	O-POWER	O	System power ON / OFF output.
41	O-MUTE	O	System mute ON / OFF output.
42	O-OPEN	O	CD tray open output.
43	O-CLOSE	O	CD tray close output.
44	O-CHACK DN	O	Disc checking down output.
45	O-CHACK UP	O	Disc checking up output.

IC, LC72131

Pin No.	Pin Name	I/O	Description																		
1	XIN	-	A crystal oscillator (7.2MHz) is connected between these pins.																		
22	XOUT	-																			
2	NC	-	Not used.																		
3	CE	I	To enable the IC. Active "H".																		
4	DI	I	Digital data input from CPU (μ PD78044BGF-015) when relevant key is operated. Active "H".																		
5	CLK	I	To clock in the data DI.																		
6	DO	O	Digital data output to CPU (μ PD78044BGF-015).																		
7	TM-BASE	O	Outputs a reference clock signal (8Hz) for the clock.																		
8	MONO / BEAT	O	Outputs "H" when MONO / BEAT is switched.																		
9	FM / AM	O	Output "L" or "H" as follows: <table border="1"> <tr> <th colspan="2">2 BAND</th> <th colspan="2">3 BAND</th> <th colspan="2">3 BAND</th> </tr> <tr> <td>AM</td><td>FM</td> <td>LW</td><td>MW</td> <td>FM</td><td>MW</td> </tr> <tr> <td>H</td><td>L</td> <td>H</td><td>H</td> <td>L</td><td>H</td> </tr> </table>	2 BAND		3 BAND		3 BAND		AM	FM	LW	MW	FM	MW	H	L	H	H	L	H
2 BAND		3 BAND		3 BAND																	
AM	FM	LW	MW	FM	MW																
H	L	H	H	L	H																
10	MW	O	Outputs "L" or "H" as follows: <table border="1"> <tr> <th colspan="2">2 BAND</th> <th colspan="2">3 BAND</th> <th colspan="2">3 BAND</th> </tr> <tr> <td>AM</td><td>FM</td> <td>LW</td><td>MW</td> <td>FM</td><td>MW</td> </tr> <tr> <td>L</td><td>L</td> <td>H</td><td>L</td> <td>L</td><td>L</td> </tr> </table>	2 BAND		3 BAND		3 BAND		AM	FM	LW	MW	FM	MW	L	L	H	L	L	L
2 BAND		3 BAND		3 BAND																	
AM	FM	LW	MW	FM	MW																
L	L	H	L	L	L																
11	IF-MUTE	O	To control internal counter.																		
12	IFIN	I	General purpose counter input.																		
13	TUNE	I	Receives "L" when station is tuned.																		
14	NC	-	Not used.																		
15	AMIN	I	Receives the AM local oscillator frequency signal.																		
16	FMIN	I	Receives the FM local oscillator frequency signal.																		
17	VDD	-	Supply power to IC (+5V).																		
18	PD	O	PLL charge pump output.																		
19	AIN	I	Nch MOS transistor for PLL active low pass filter.																		
20	AOUT	O																			
21	VSS	-	Ground.																		

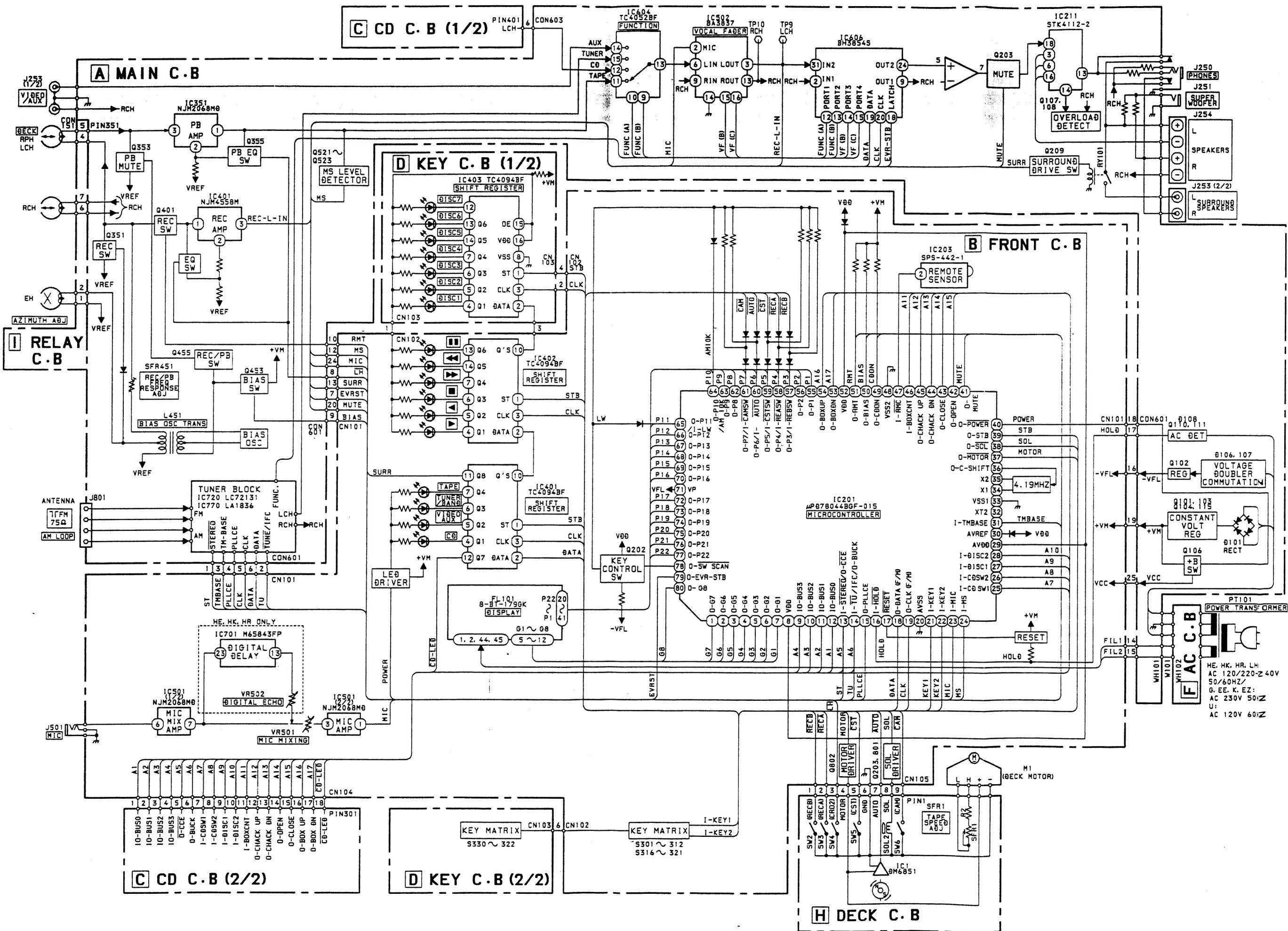
Pin No.	Pin Name	I/O	Description
46	I-BOXCNT	I	Disc box count input.
47	I-RMC	I	System remote control input. Active "L".
48	VSS2	-	Connected to GND.
49	O-CDON	O	CD power ON / OFF output.
50	O-BIAS	O	Cassette deck bias ON / OFF output.
51	O-RMT	O	REC muting output. Active "H".
52	VDD	-	Connected to +5.6V.
53	O-BOX DN	O	Disc box motor down output.
54	O-BOX UP	O	Disc box motor up output.
55 ~ 56	O-P1 ~ O-P2	O	FL segment output P1 ~ P2.
57	O-P3 / I-REBSW	O / I	FL segment output P3 / Deck B side recording permission switch input.
58	O-P4 / I-REASW	O / I	FL segment output P4 / Deck A side recording permission switch input.
59	O-P5 / I-CST SW	O / I	FL segment output P5 / Deck cassette detection switch input.
60	O-P6 / I-AUTO	O / I	FL segment output P6 / Deck auto stop input.
61	O-P7 / I-CAM SW	O / I	FL segment output P7 / Deck cam switch input.
62 ~ 63	O-P8 ~ O-P9	O	FL segment output P8 ~ P9.
64	O-P10 / I-AM10K	O / I	FL segment output P10 / MW 10kHz initial diode input.
65	O-P11 / I-LW	O / I	FL segment output P11 / LW support diode input.
66 ~ 70	O-P12 ~ O-P16	O	FL segment output P12 ~ P16.
71	VP	-	Connected to -22V.
72 ~ 77	O-P17 ~ O-P22	O	FL segment output P17 ~ P22.
78	O-SWSCAN	O	Segment input permission output.
79	O-EVRSTB	O	Electronic volume data latch output.
80	O-G8	O	FL display grid output.

Table-1

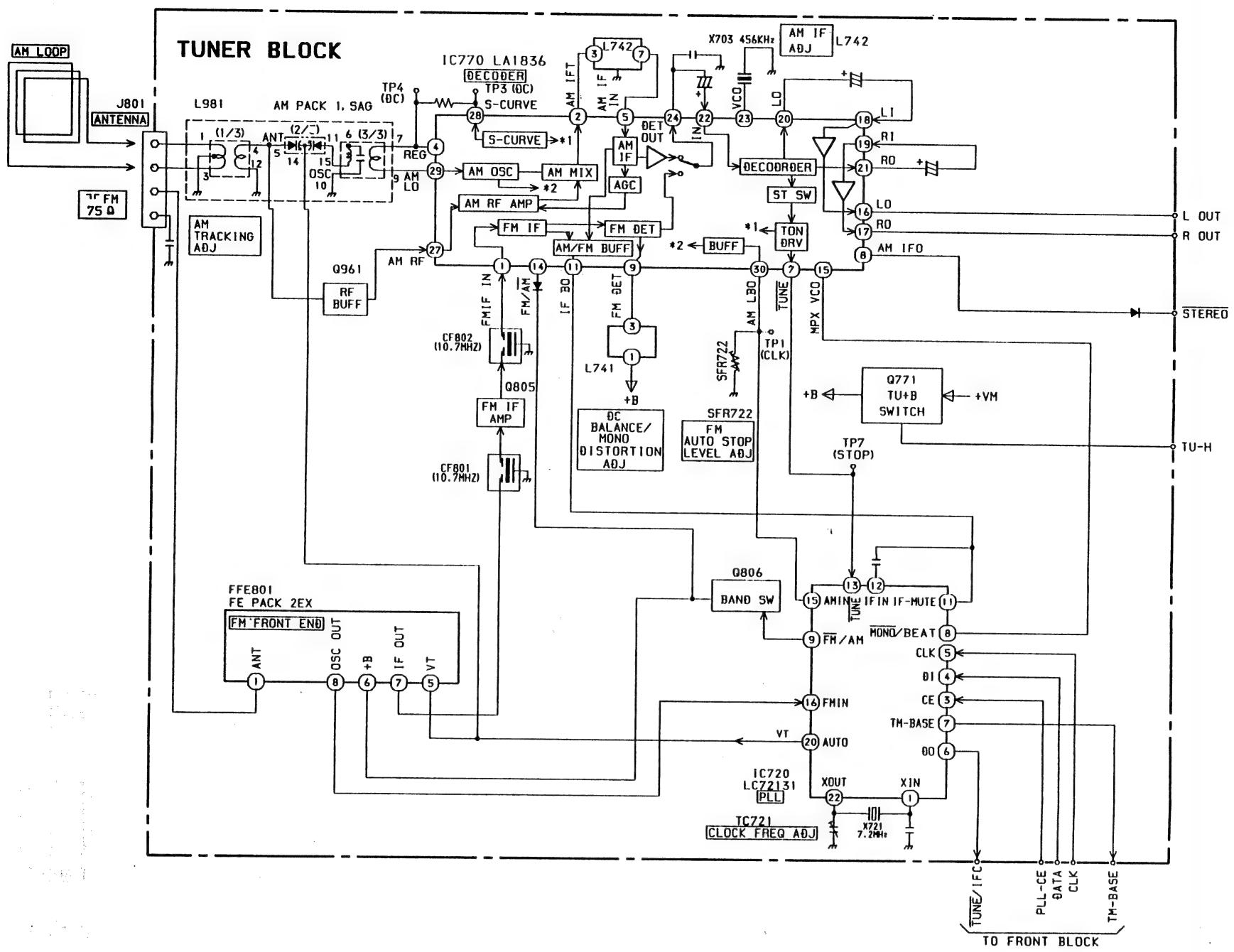
* C-SHIFT output become "H" before outputing the data to PLL at below the FM frequency range in order to reduce the FM tuning interfere.

FM (OIRT)	Frequency range		Received step
	66.93 ~ 71.12 MHz	67.28 ~ 71.48 MHz	
FM	79.45 ~ 83.65 MHz	79.90 ~ 84.10 MHz	50KHz
	87.85 ~ 92.00 MHz	88.30 ~ 92.50 MHz	
	96.20 ~ 100.40 MHz	96.75 ~ 100.95 MHz	
	104.55 ~ 105.15 MHz		

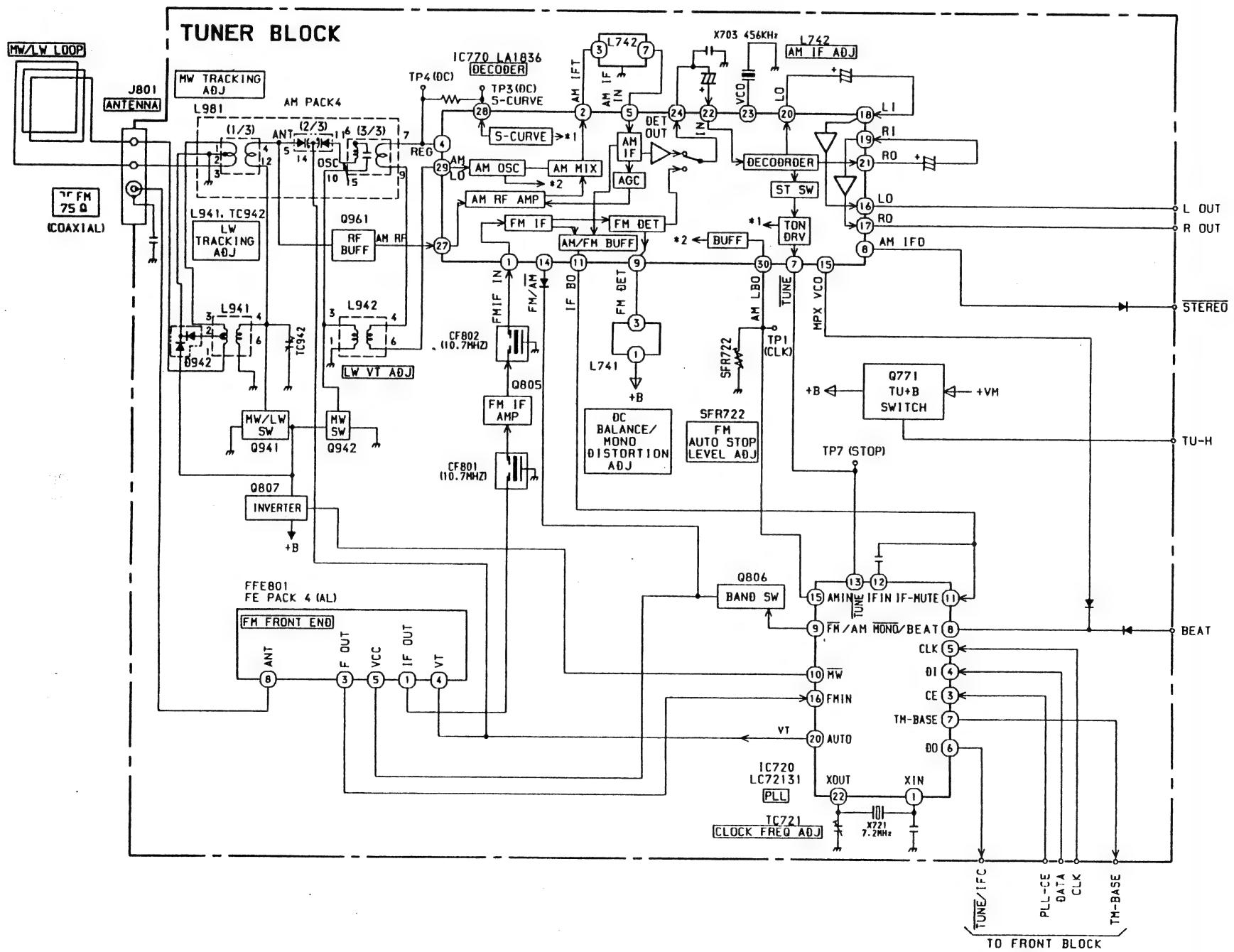
BLOCK DIAGRAM – 1 (MAIN / FRONT)



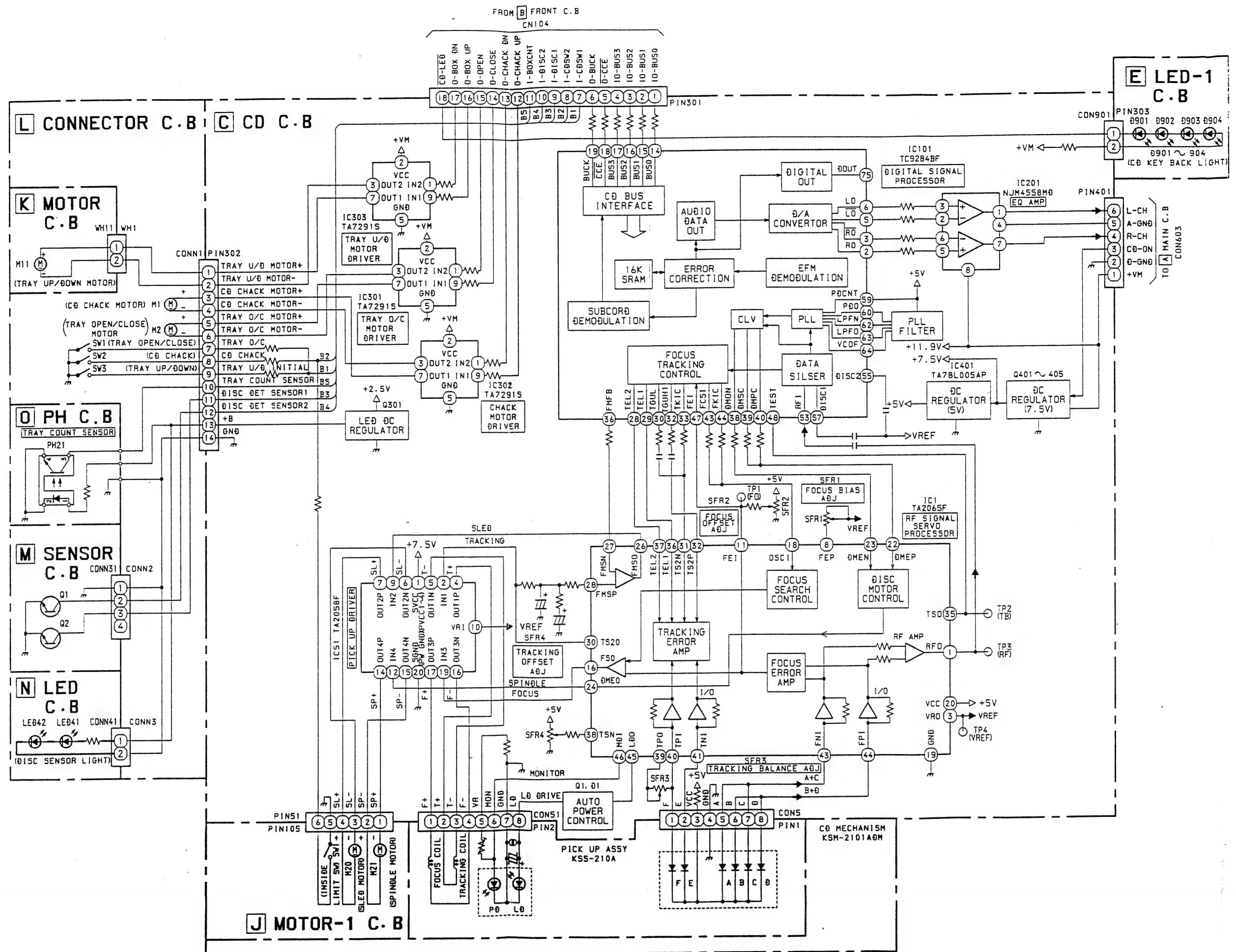
BLOCK DIAGRAM - 2 (TUNER : HE, HK, HR, LH, U, G)



BLOCK DIAGRAM - 3 (TUNER : EE, K, EZ)



BLOCK DIAGRAM – 4 (CD)



TRANSISTOR ILLUSTRATION



2SA1296
2SC1815
2SC3266
KTA1266
KTC3198



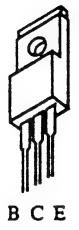
2SA1015
2SA952



DTA114YS
DTC144WS



2SA1318
2SC3331



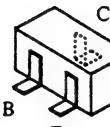
2SB1370



PT4850F

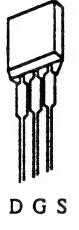


2SK543



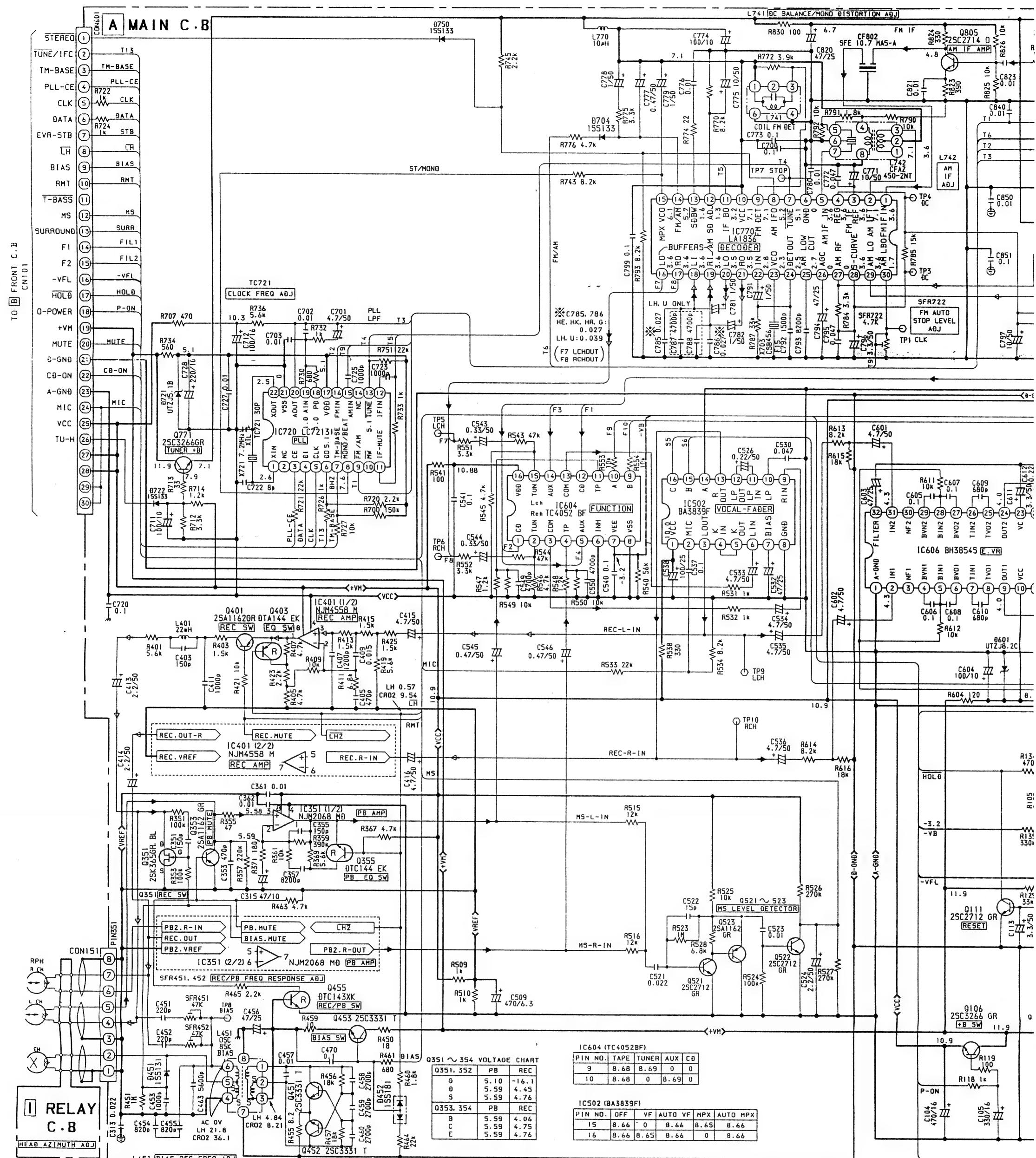
2SA1162
2SC2712
2SC2714
2SC3326

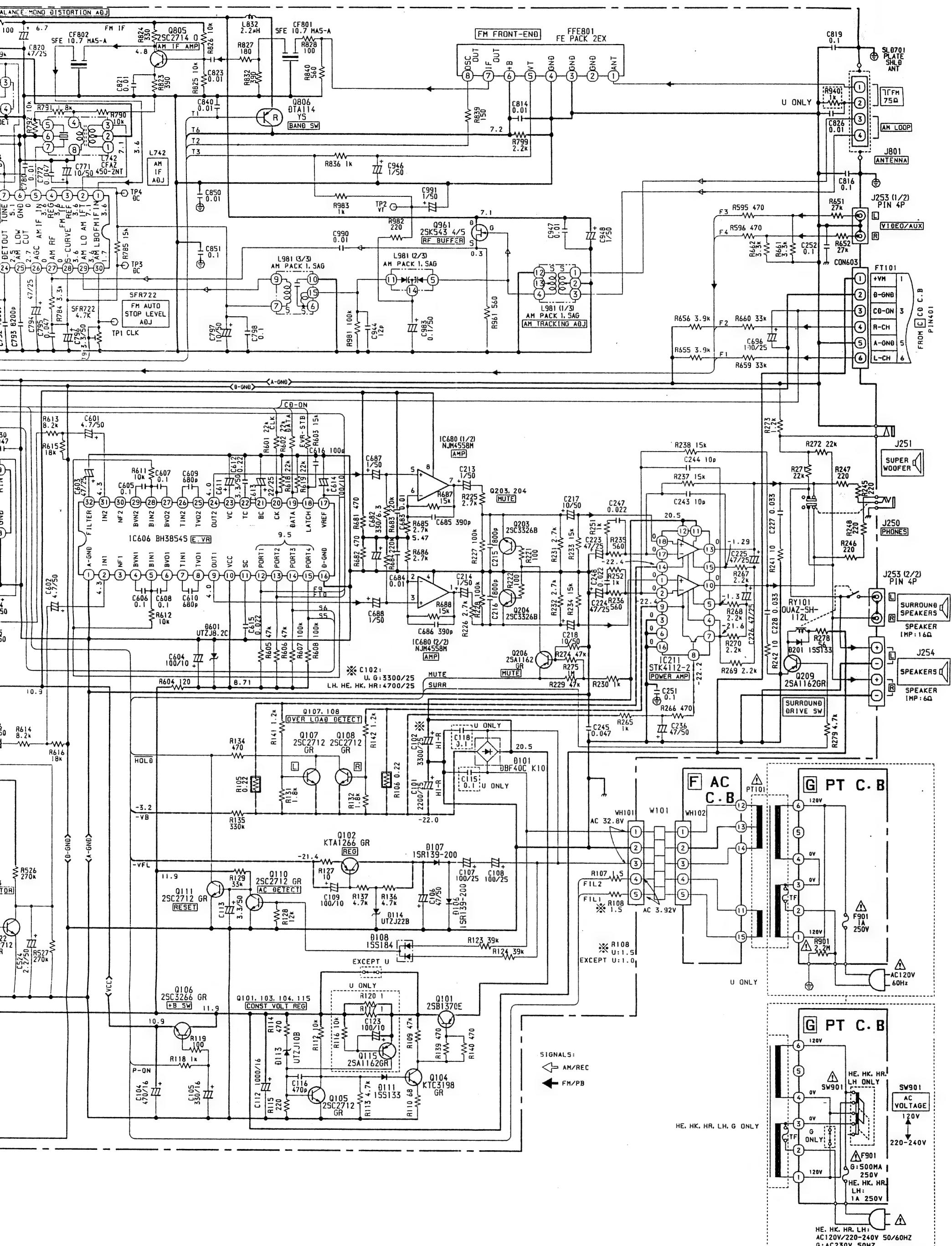
DTA143EK
DTA144EK
DTC143XK
DTC144EK
DTC144WK



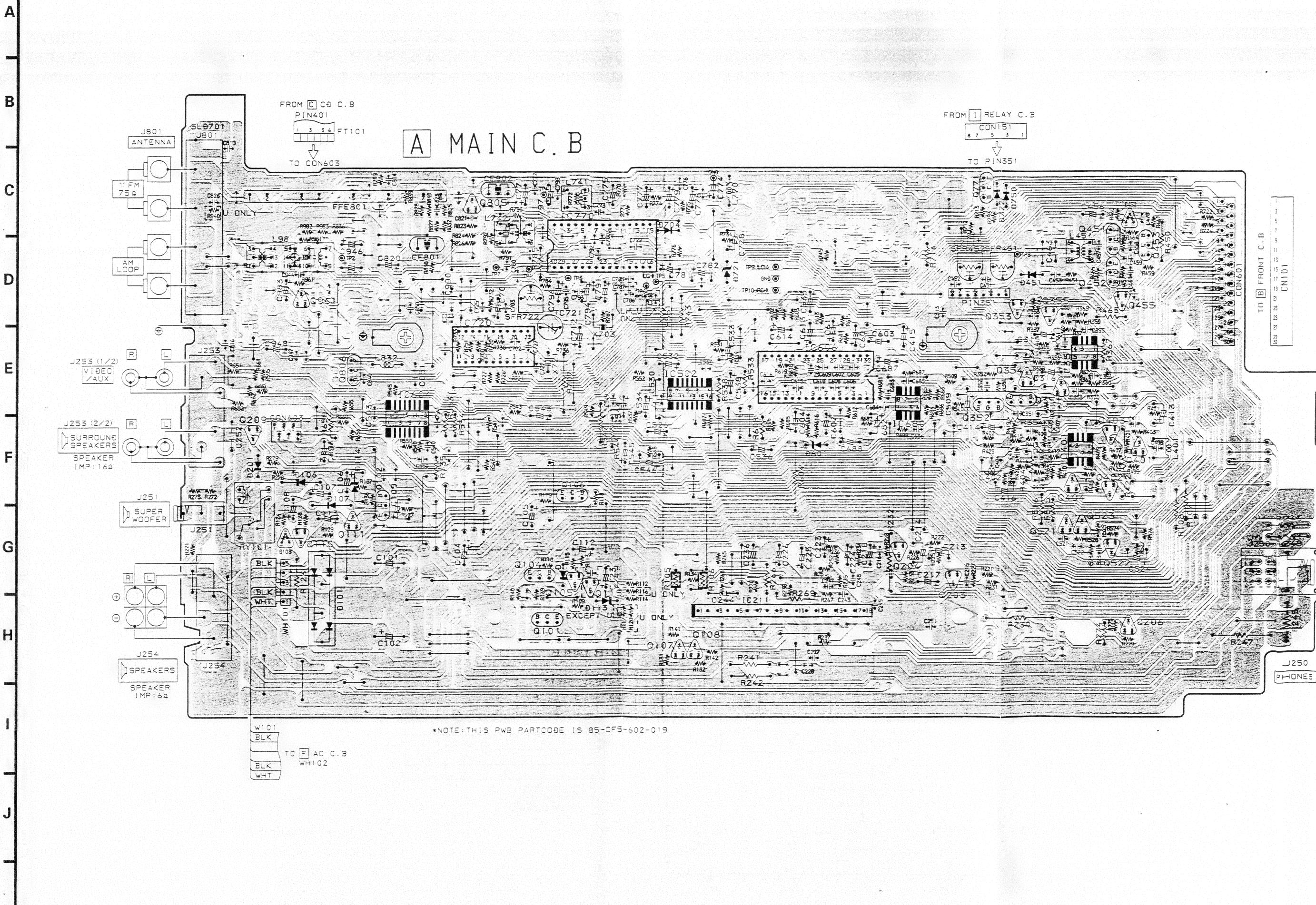
2SK365

SCHEMATIC DIAGRAM – 1 (MAIN : HE, HK, HR, LH, U, G)



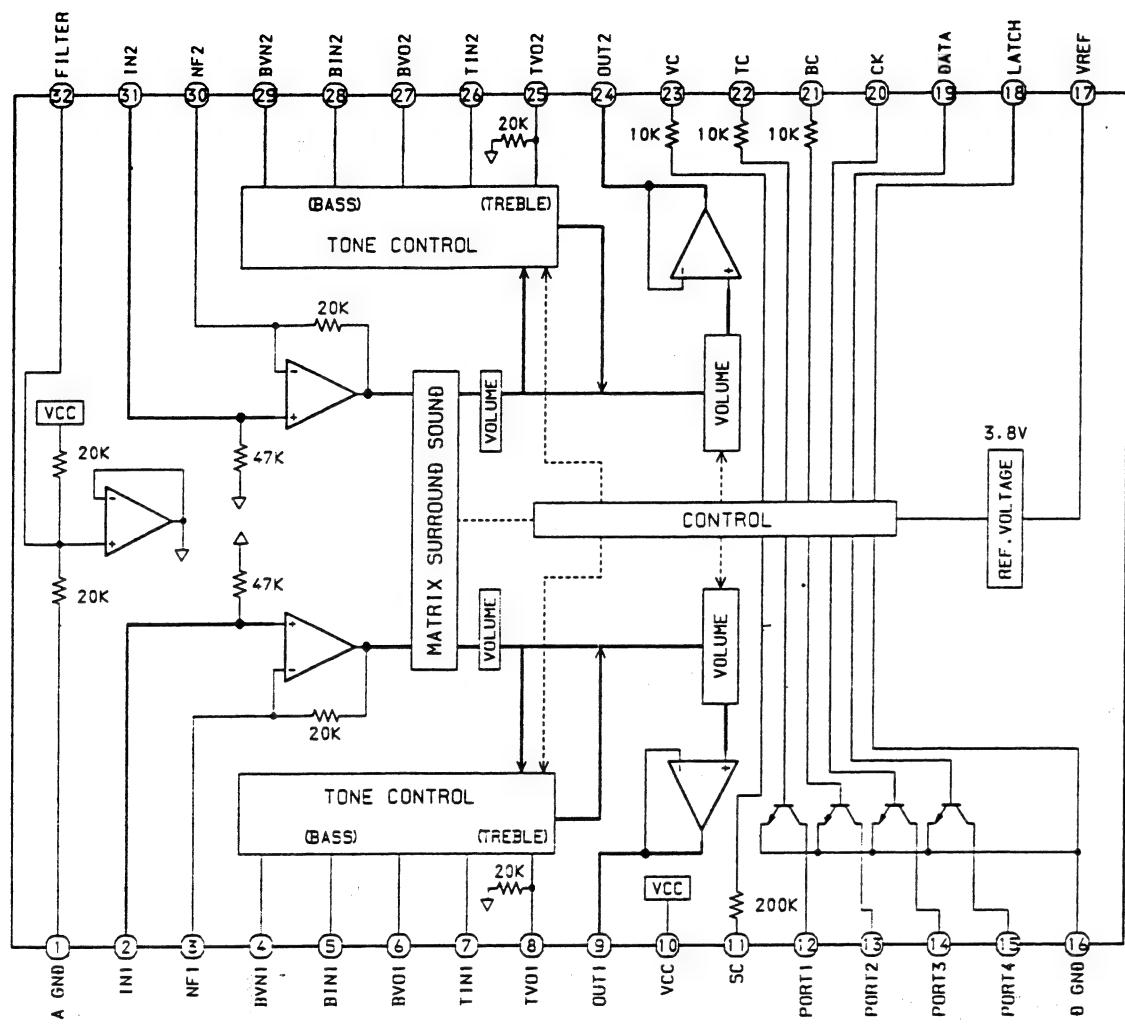


1 2 3 4 5 6 7 8 9 10 11 12 13 14

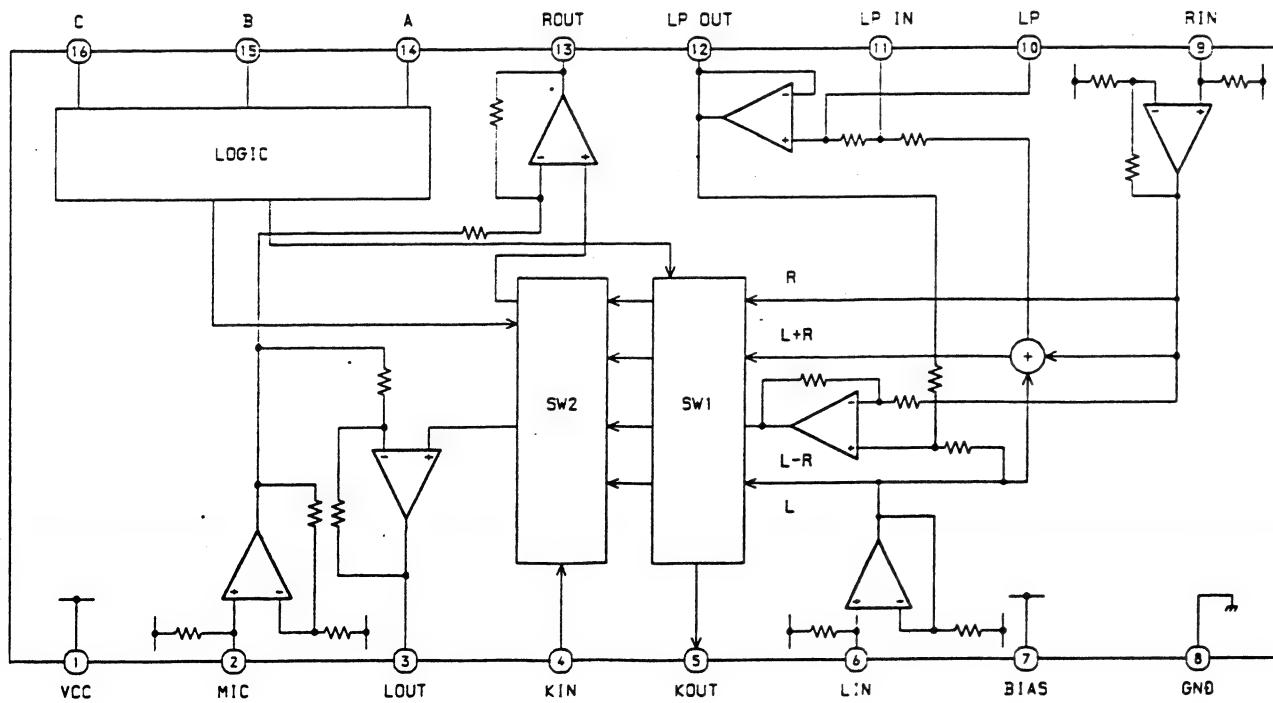


IC BLOCK DIAGRAM – 1

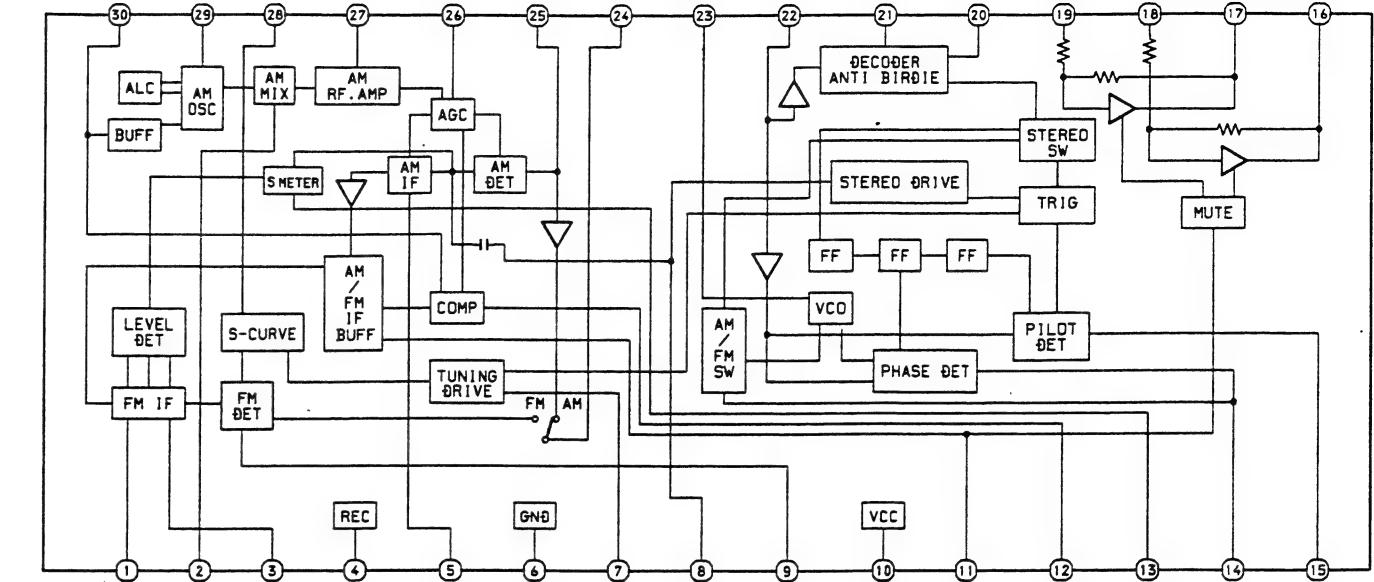
IC, BH3854S



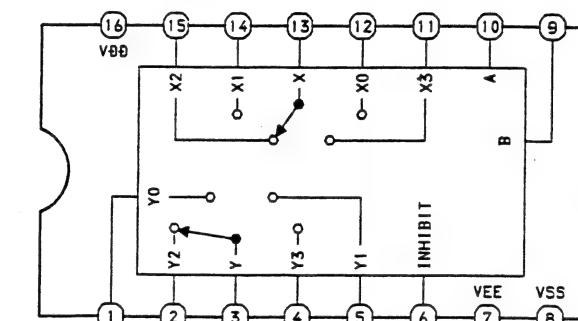
IC, BA3839F



IC, LA1836



IC, TC4052BF

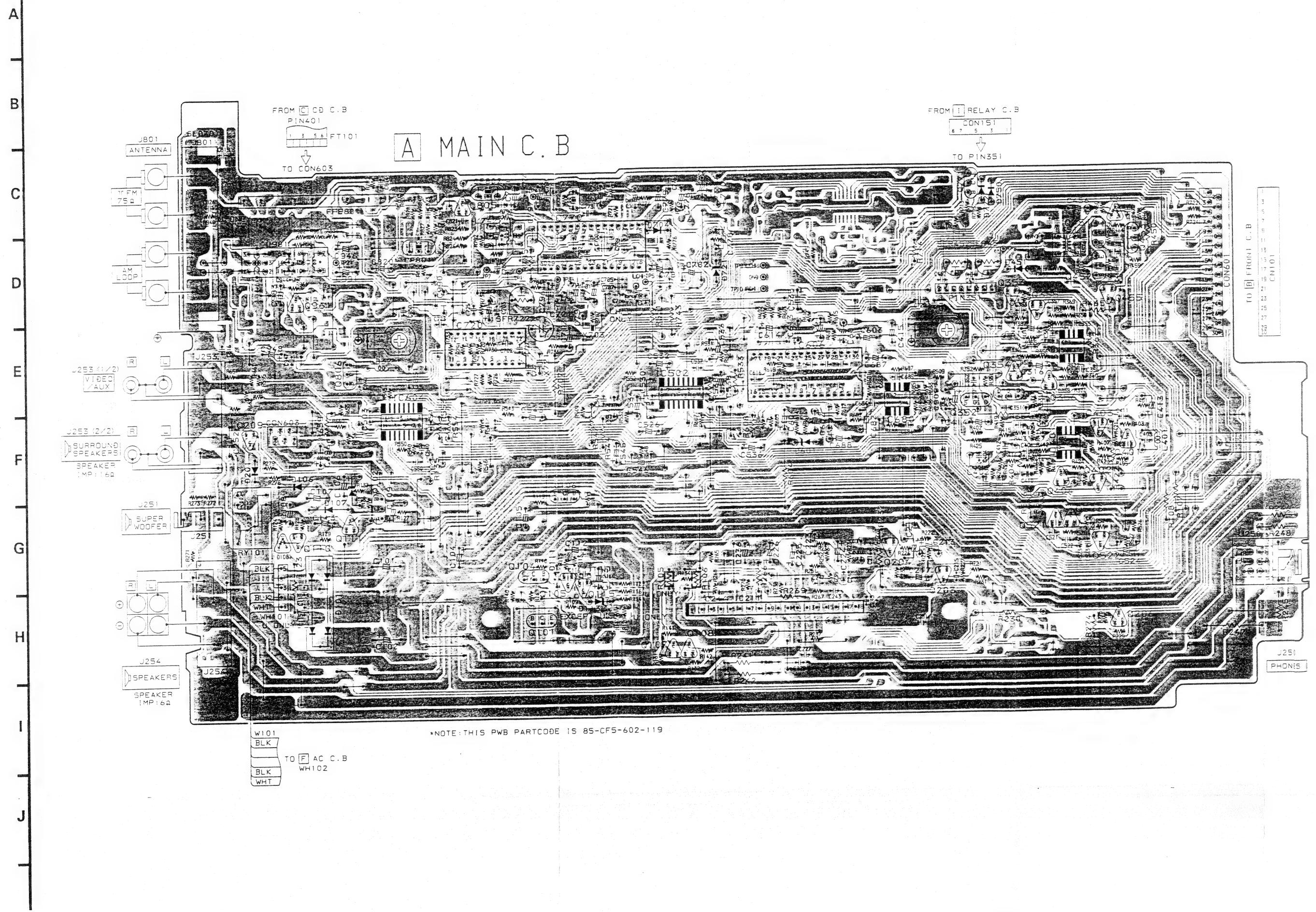


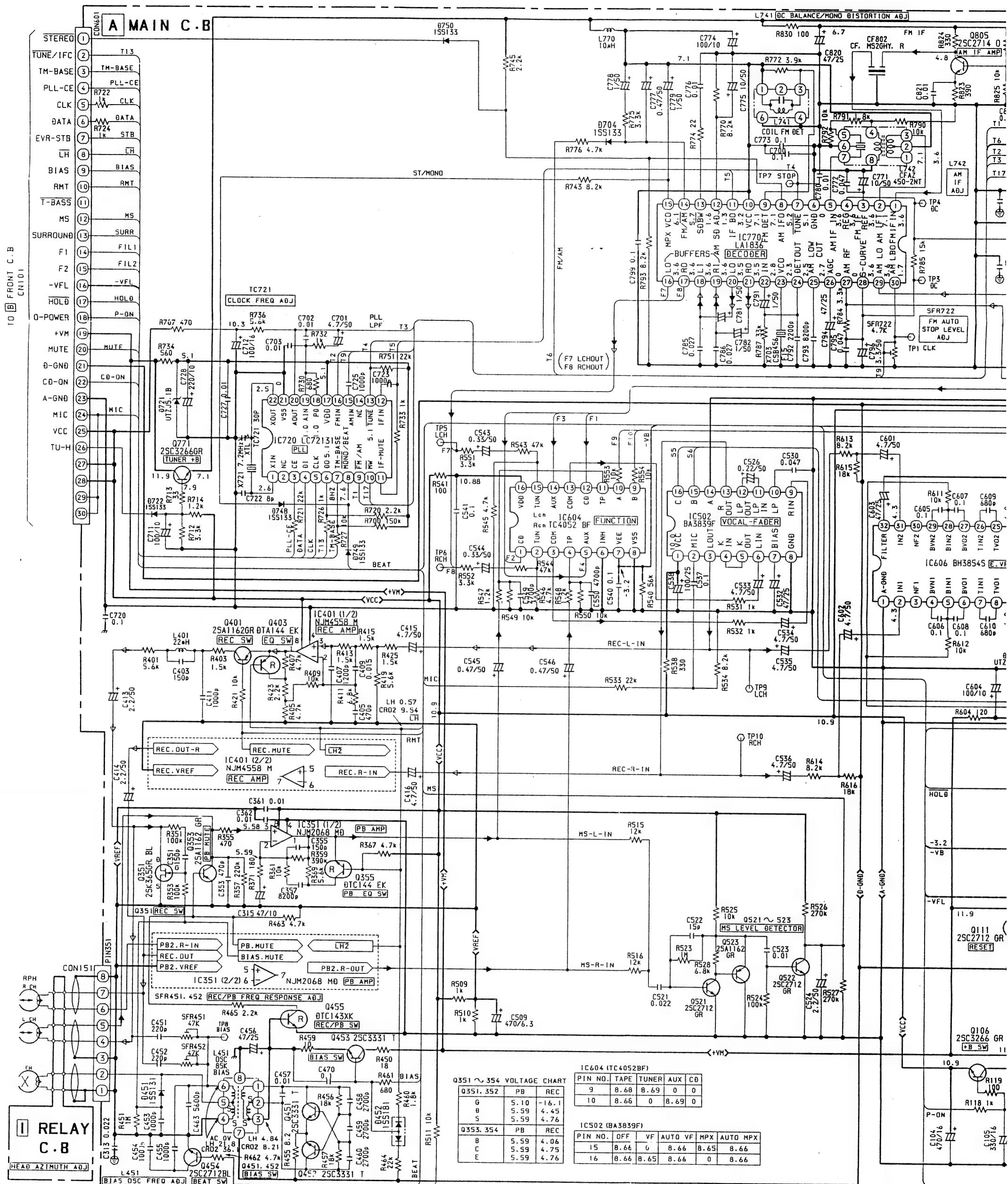
TRUTH TABLE

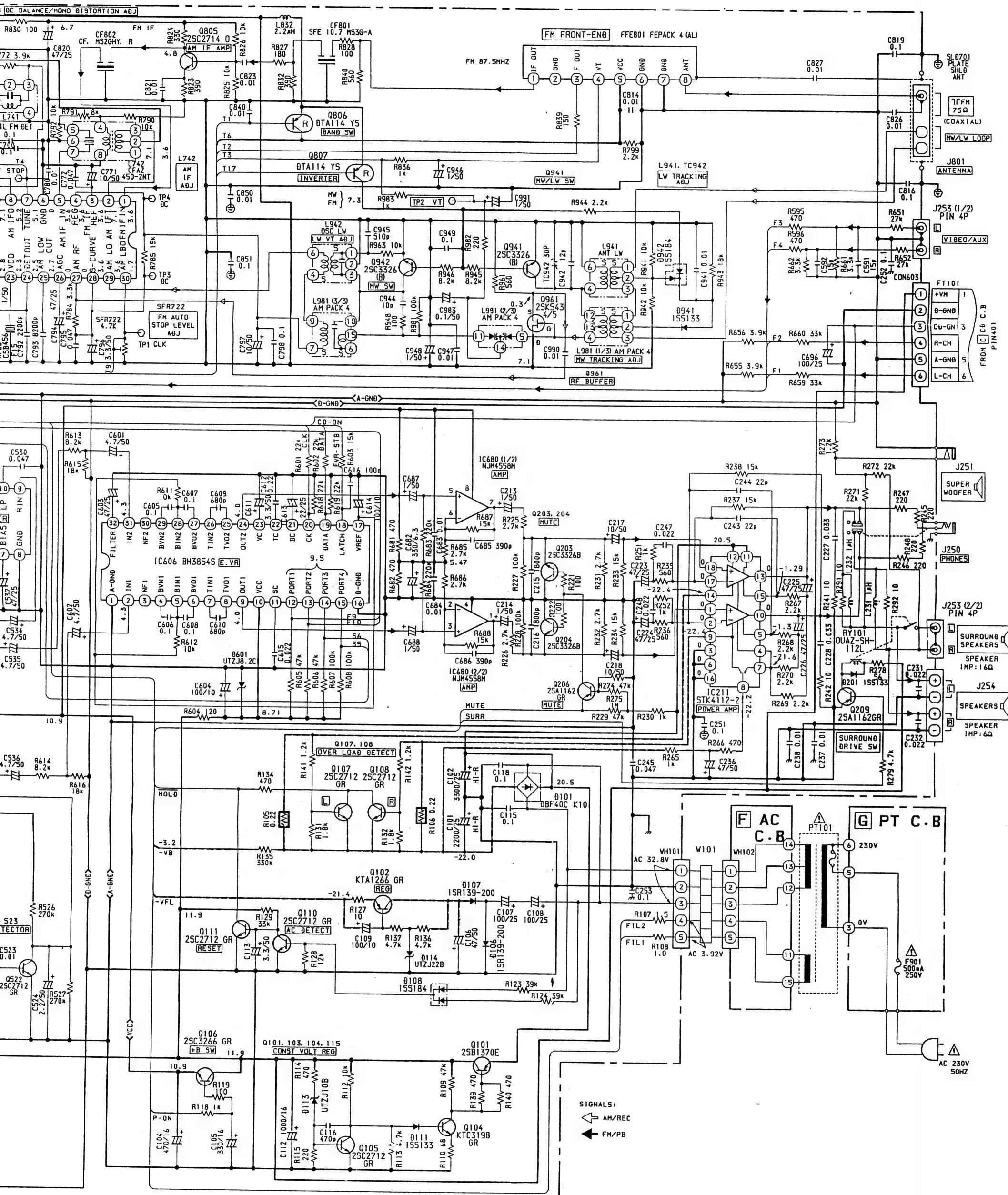
CONTROL INPUTS			ON SWITCH	
INHIBIT	B	A	Y0	X0
L	L	L	Y1	X1
L	L	H	Y2	X2
L	H	L	Y3	X3
H	X	X	—	—

L:LOW LEVEL
H:HIGH LEVEL
I:IRRELEVANT

1 2 3 4 5 6 7 8 9 10 11 12 13 14

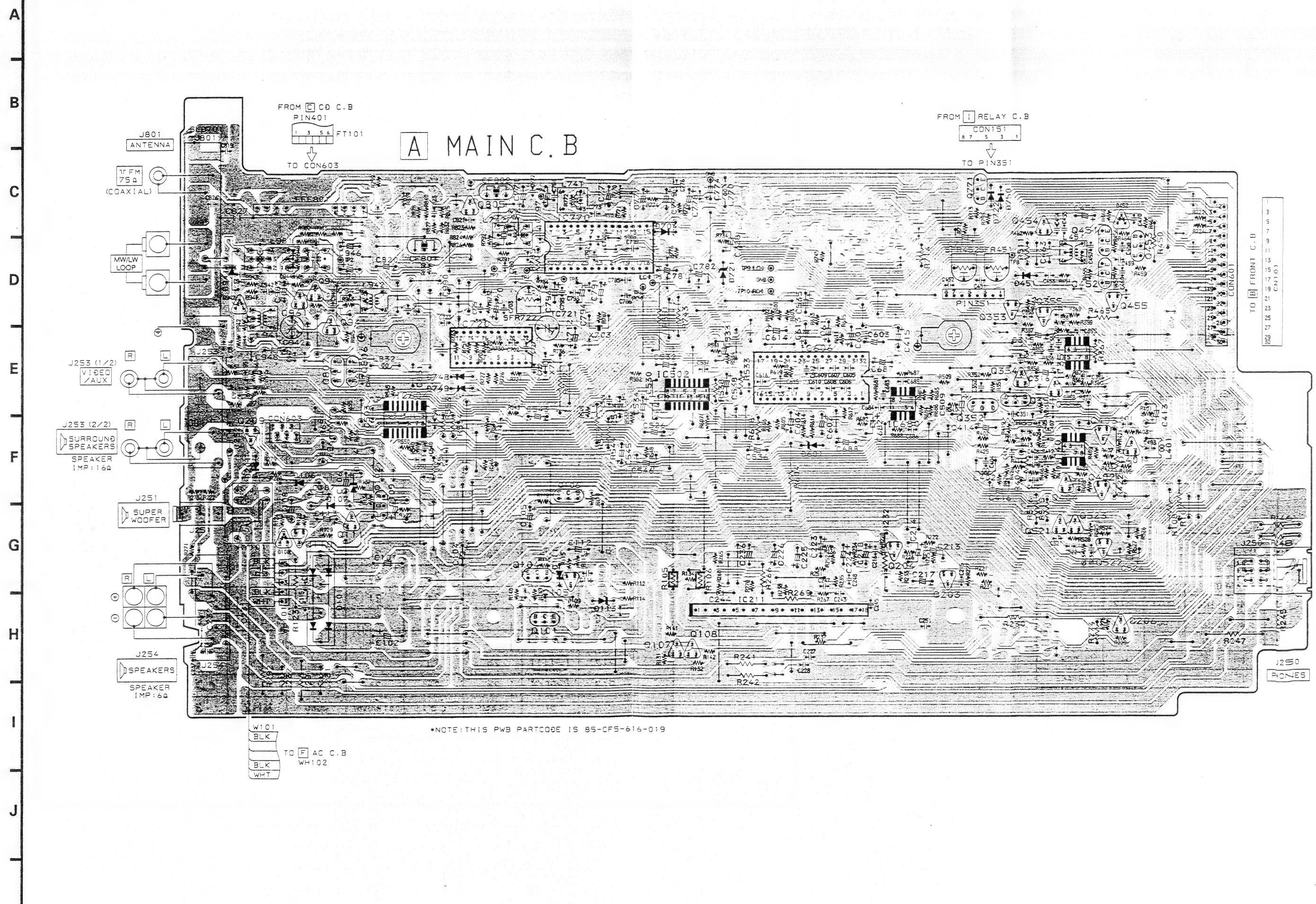






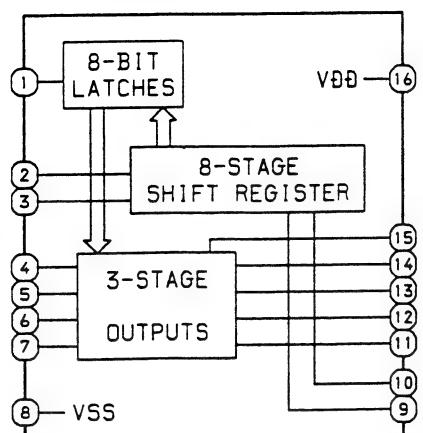
WIRING - 3 (MAIN : EE, K, EZ)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

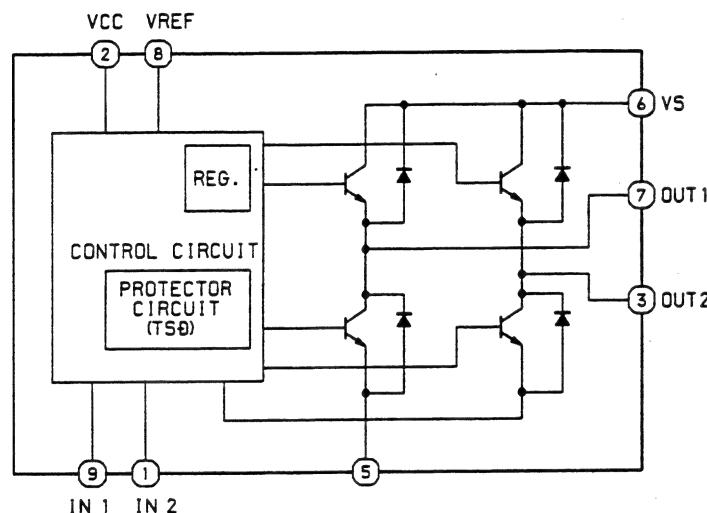


IC BLOCK DIAGRAM - 2

IC, TC4094BF



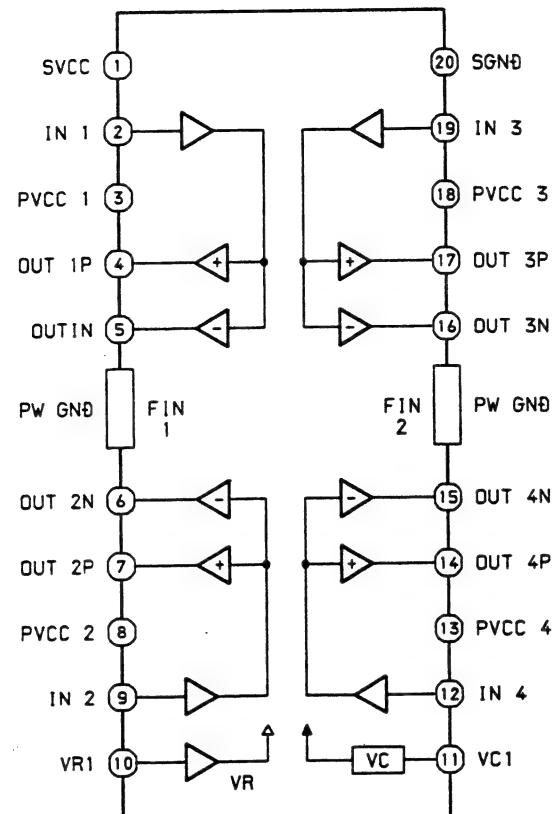
IC, TA7291S



INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW
0	1	L	H	CCW
1	1	L	L	BRAKE

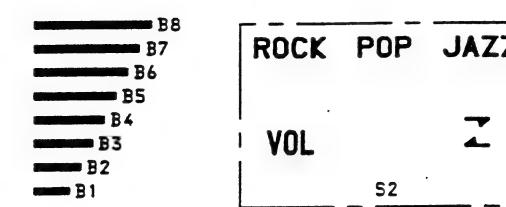
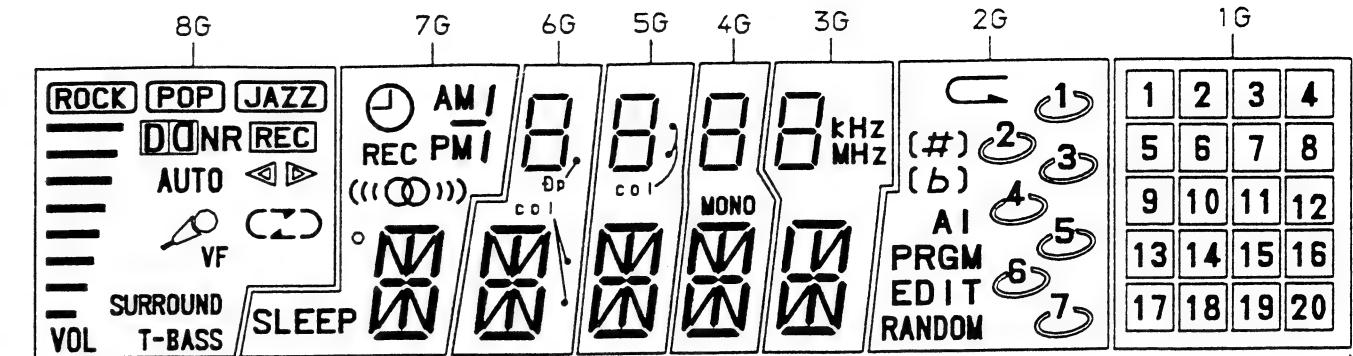
∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE

IC, TA2058F

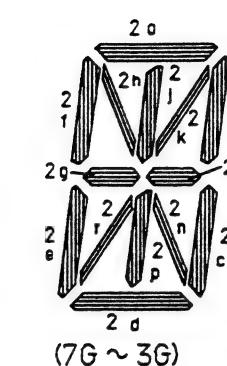


FL (8-BT-179GK) GRID ASSIGNMENT / ANODE CONNECTION

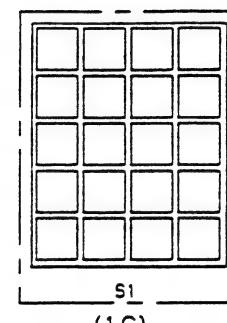
GRID ASSIGNMENT



(8G)



(6G ~ 3G)



(1G)

ANODE CONNECTION

	8G	7G	6G	5G	4G	3G	2G	1G
P1	T-BASS	2d	2d	2d	2d	2d	RANDOM	20
P2	SURROUND	2j, 2p	2j, 2p	2j, 2p	2j, 2p	2j, 2p	EDIT	19
P3	VF	2n	2n	2n	2n	2n	PRGM	18
P4	C	2r	2r	2r	2r	2r	AI	17
P5	D	2c	2c	2c	2c	2c	(7)	16
P6	AUTO	2e	2e	2e	2e	2e	7	15
P7	▶	2m	2m	2m	2m	2m	(6)	14
P8	◀	2g	2g	2g	2g	2g	6	13
P9	DO NR	2i	2i	2i	2i	2i	(5)	12
P10	REC	2b	2b	2b	2b	2b	5	11
P11	(JAZZ)	2k	2k	2k	2k	2k	(4)	10
P12	(POP)	2h	2h	2h	2h	2h	4	9
P13	(ROCK)	2a	2a	2a	2a	2a	(3)	8
P14	B1	SLEEP	c0 i	c0 i (DOWN)	MONO	MHZ	3	7
P15	B2	o	0p	c0 i (UP)	-	KHZ	(2)	6
P16	B3	AM	1a	1a	1a	1a	2	5
P17	B4	/	1b	1b	1b	1b	(1)	4
P18	B5	-	1f	1f	1f	1f	1	3
P19	B6	PM	1g	1g	1g	1g	(#)	2
P20	B7	(1c	1c	1c	1c	(b)	1
P21	B8	REC	1e	1e	1e	1e	S1	
P22	S2	((0))	1d	1d	1d	1d	#b	-

1 2 3 4 5 6 7 8 9 10 11 12 13 14

A

B

2

D

三

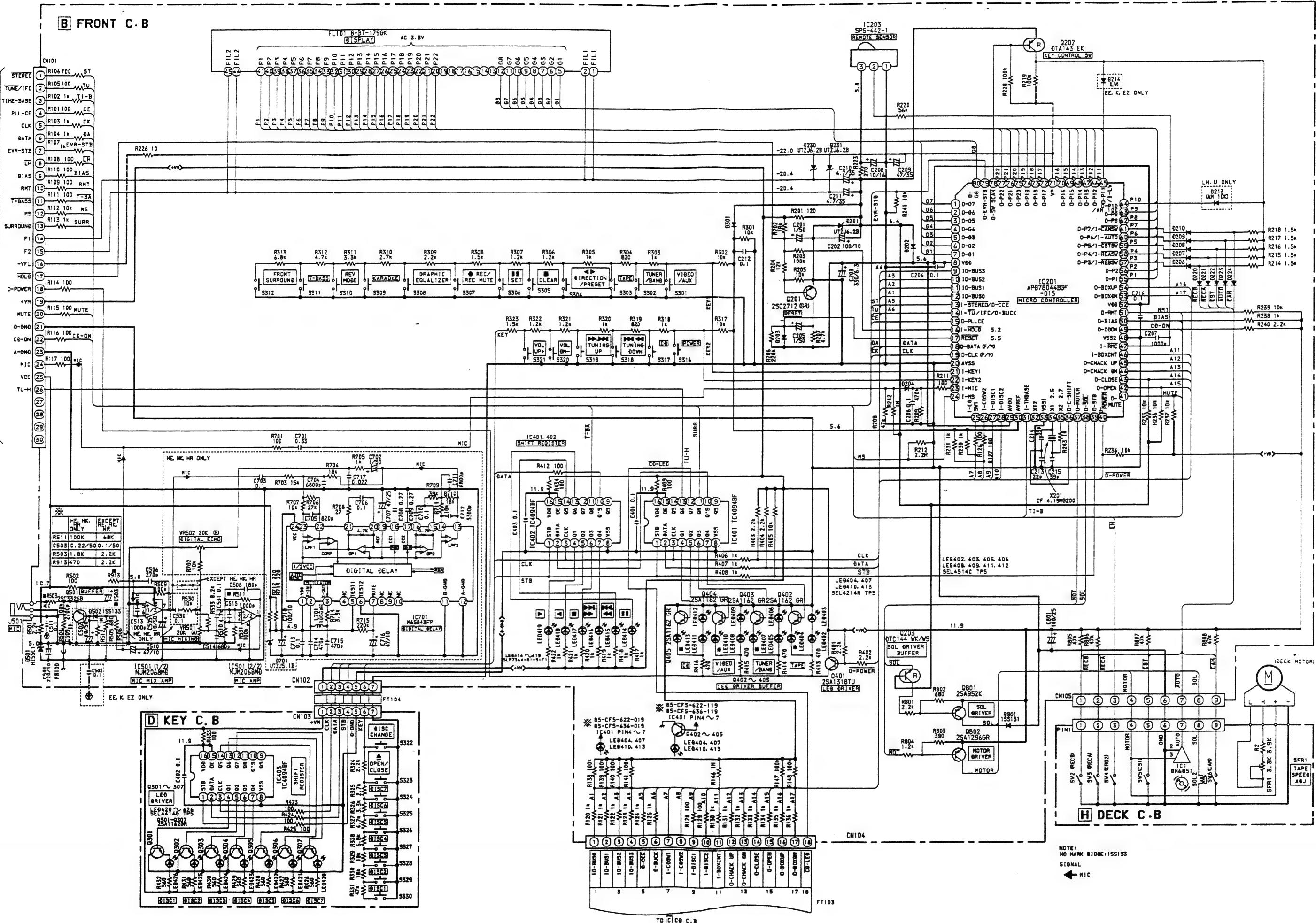
F

6

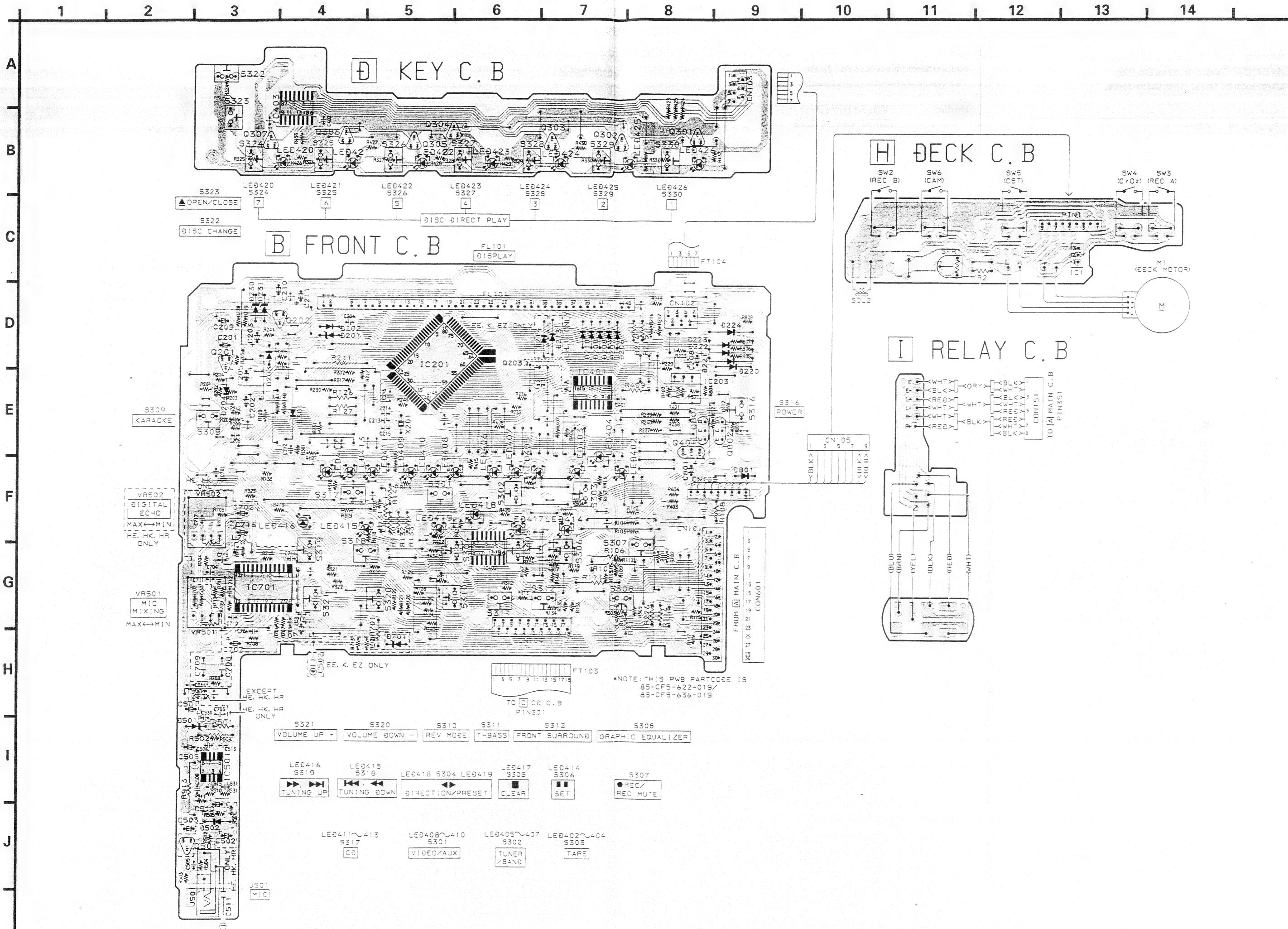
4

1

*NOTE: THIS PWB PARTCODE IS 85-CES-616-1



WIRING - 5 (FRONT / DECK)



AD PORT INPUT LEVEL / WAVEFORM

① I-CD SW2

CD SWITCH (LIMIT SW, CHECK SW) AD INPUT

LIMIT SW : Switch on at the most internal circle.

CHECK SW : Switch on when checking.

Voltage must be within when below mode.

VOLTAGE	AD		LIMIT-SW	CHECK-SW
	Hex	Dec		
5.60	FF	255	OFF	OFF
4.95	E1	225	ON	OFF
3.83	AE	174	OFF	ON
3.08	8C	140	ON	ON
0.00	00	0		

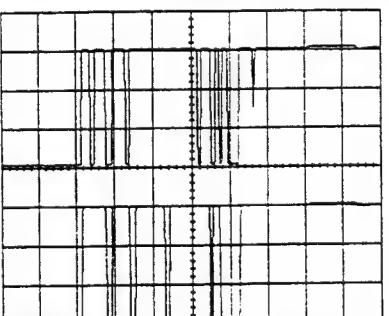
④ DISC 1

⑤ DISC 2

Signal pattern : No disc, 8 cm, 12 cm
Tray can not close when signal pattern is different.

No disc

VOLT / DIV : 2V
TIME / DIV : 100mS



⑤ DISC 2
④ DISC 1

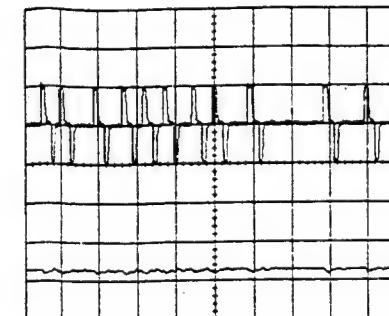
⑥ PDO

⑦ LPFO

Disc turn speed

High

VOLT / DIV : 2V
TIME / DIV : 1μS



⑥ PDO
⑦ LPFO

⑧ DMPC

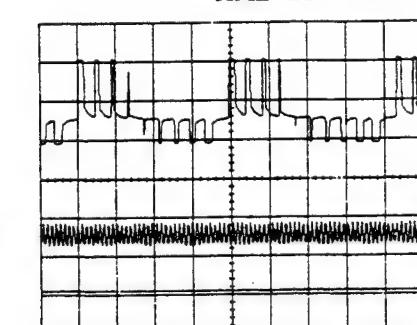
⑨ DMFC

⑩ DMEO

Spindle motor rotation speed

High

⑧ ⑨ VOLT / DIV : 2V
TIME / DIV : 5mS
⑩ VOLT / DIV : 1V
TIME / DIV : 5mS



⑧ DMPC
⑨ DMFC
⑩ DMEO

② I-CD SW1

CD SWITCH (OPEN SW, BOX SW) AD INPUT

OPEN SW : Switch off when open or close.

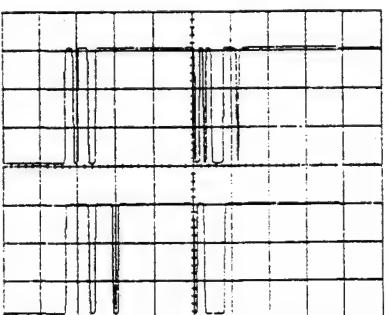
BOX SW : Switch on when the box is the most below position.

Voltage must be within when below mode.

VOLTAGE	AD		LIMIT-SW	CHECK-SW
	Hex	Dec		
5.60	FF	255	OFF	OFF
4.95	E1	225	ON	OFF
3.83	AE	174	OFF	ON
3.08	8C	140	ON	ON
0.00	00	0		

8 cm

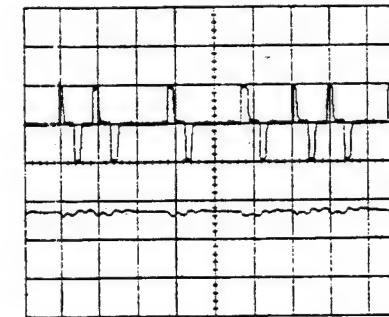
VOLT / DIV : 2V
TIME / DIV : 100mS



⑤ DISC 2
④ DISC 1

Slow

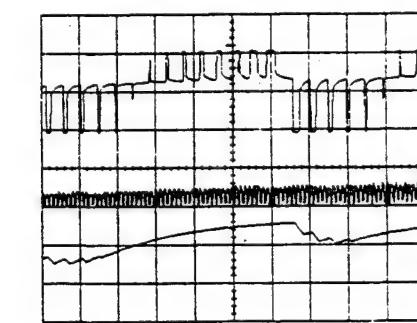
VOLT / DIV : 2V
TIME / DIV : 1μS



⑥ PDO
⑦ LPFO

Slow

⑧ ⑨ VOLT / DIV : 2V
TIME / DIV : 5mS
⑩ VOLT / DIV : 1V
TIME / DIV : 5mS

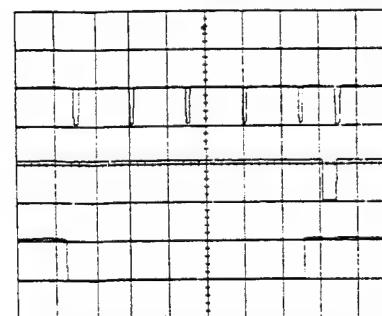


⑧ DMPC
⑨ DMFC
⑩ DMEO

③ BOX COUNT SENSOR

Tray 1 open / close

CLOSE VOLT / DIV : 5V
TIME / DIV : 200mS

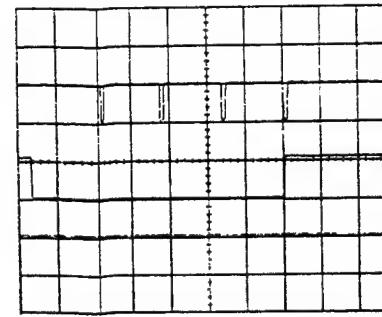


1-BOX CNT

O-BOX UP

O-BOX DN

OPEN VOLT / DIV : 5V
TIME / DIV : 200mS



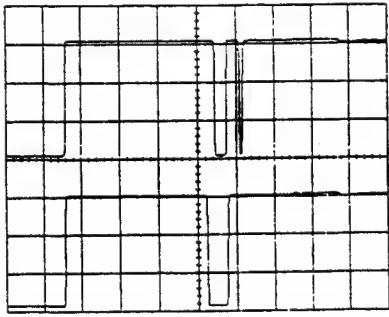
1-BOX CNT

O-BOX UP

O-BOX DN

12 cm

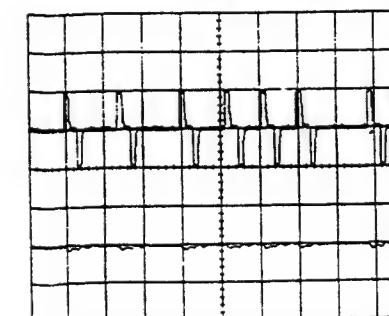
VOLT / DIV : 2V
TIME / DIV : 100mS



⑤ DISC 2
④ DISC 1

Normal

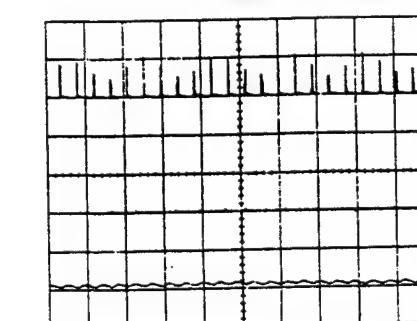
VOLT / DIV : 2V
TIME / DIV : 1μS



⑥ PDO
⑦ LPFO

Normal

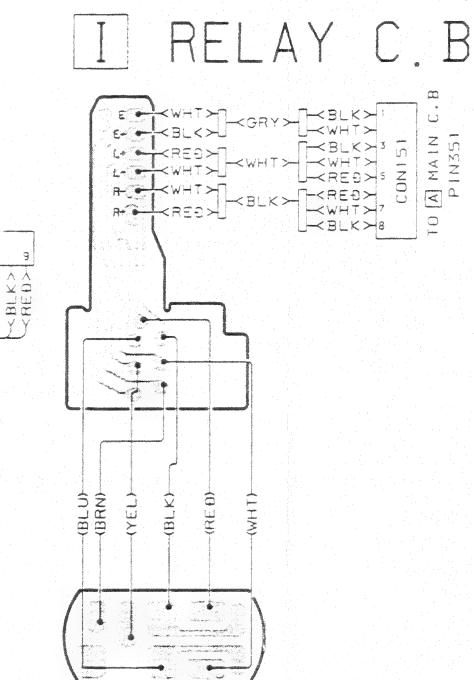
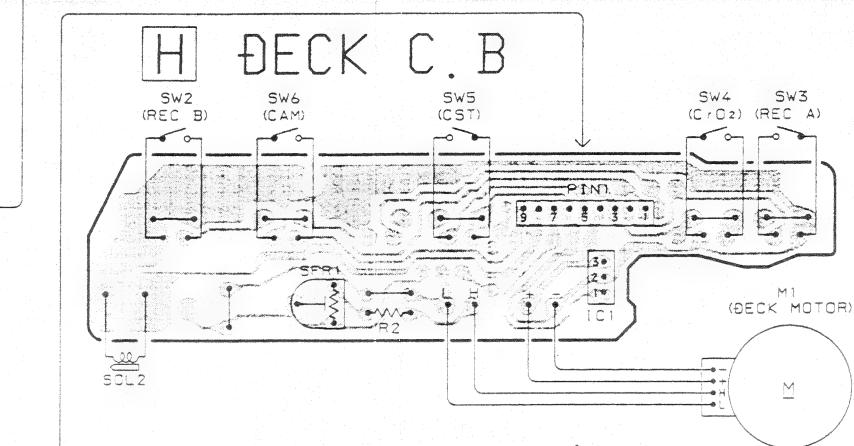
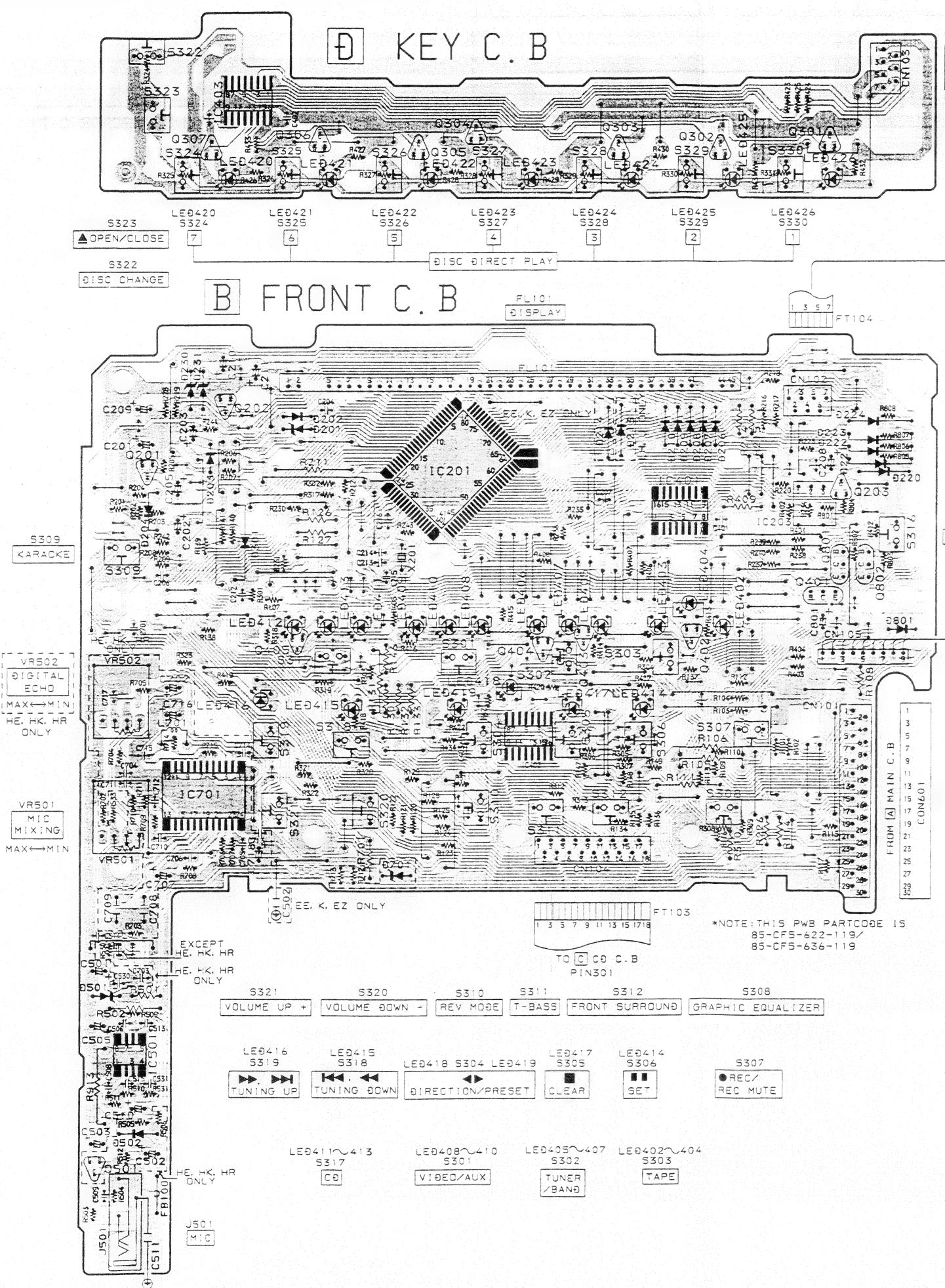
⑧ ⑨ VOLT / DIV : 2V
TIME / DIV : 5mS
⑩ VOLT / DIV : 1V
TIME / DIV : 5mS



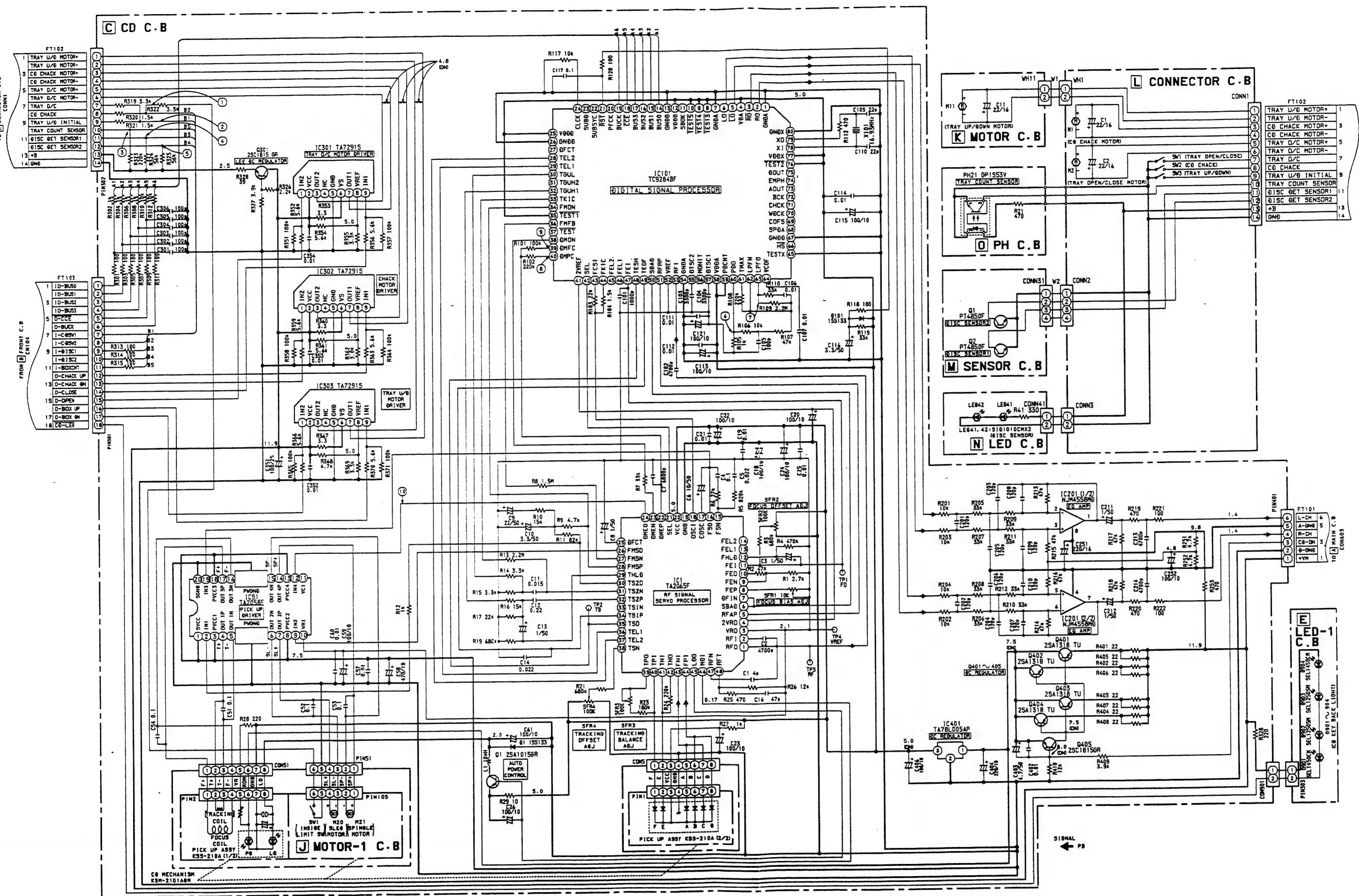
⑧ DMPC
VREF LEVEL
⑨ DMFC
VREF LEVEL
⑩ DMEO
VREF LEVEL

1 2 3 4 5 6 7 8 9 10 11 12 13 14

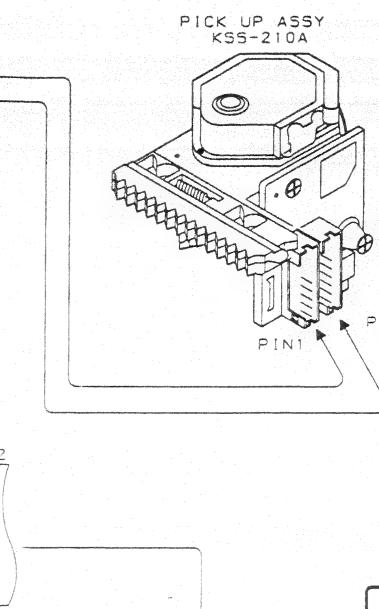
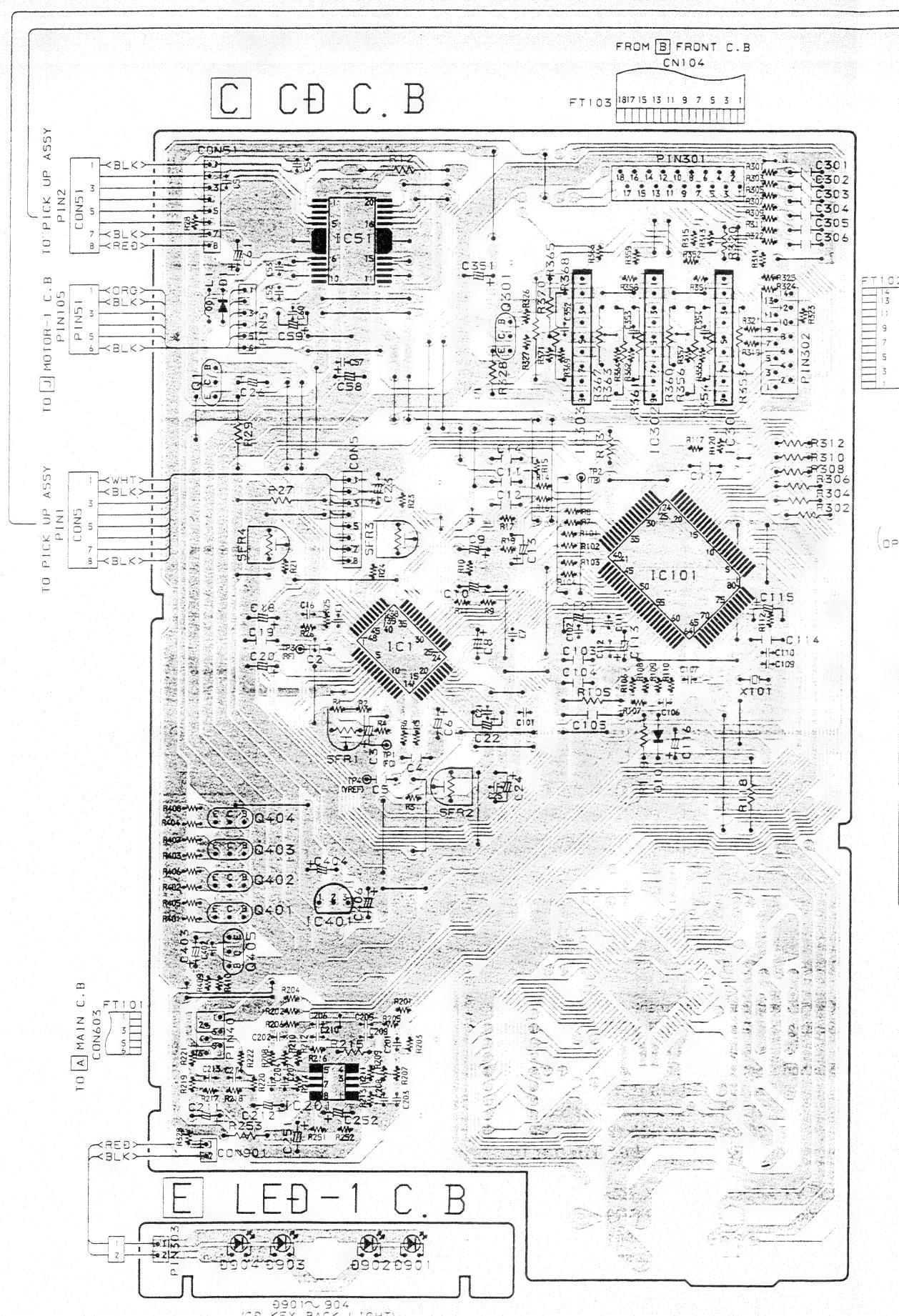
A B C D E F G H I J



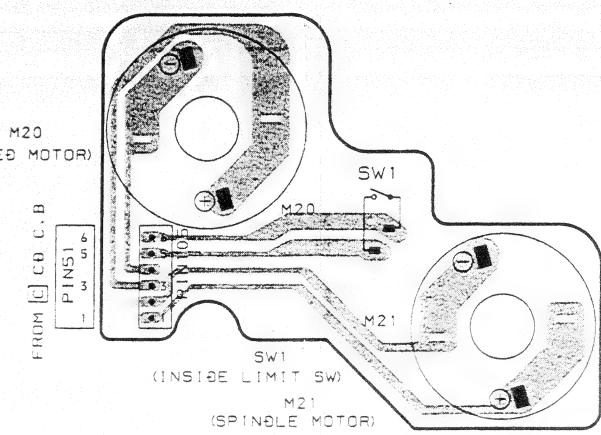
SCHEMATIC DIAGRAM – 4 (CD)



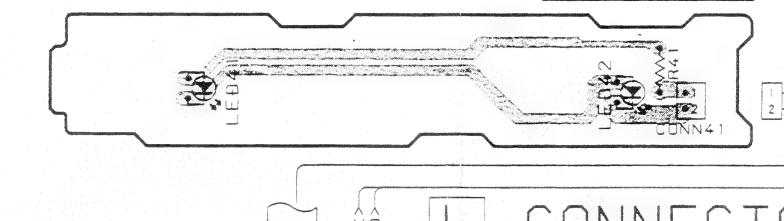
A —
B —
C —
D —
E —
F —
G —
H —
I —
J —



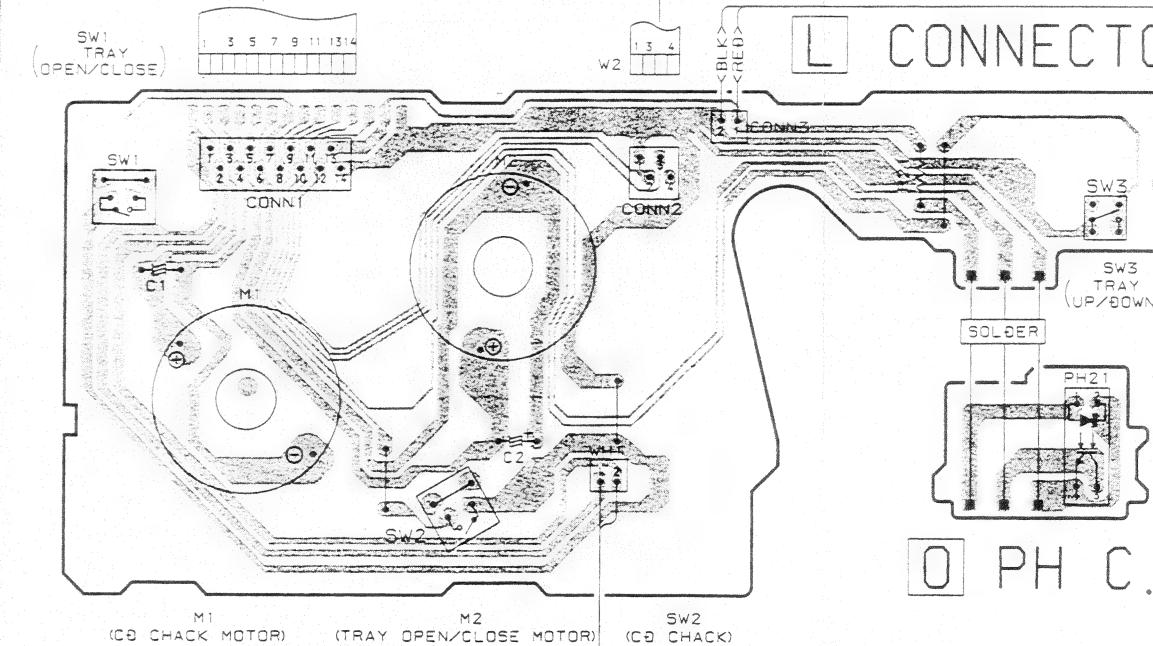
J MOTOR-1 C. B



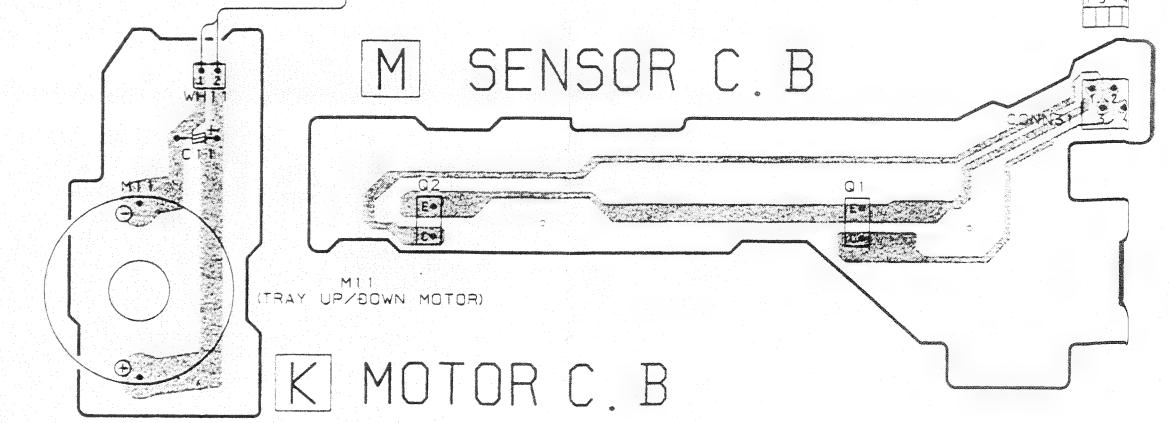
N LED C. B



CONNECTOR C. B

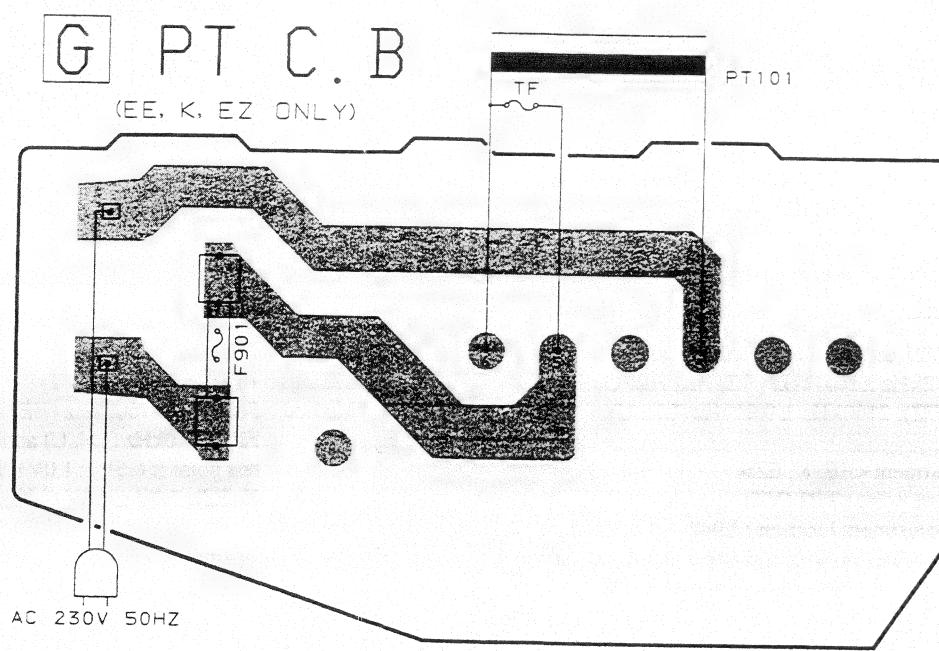
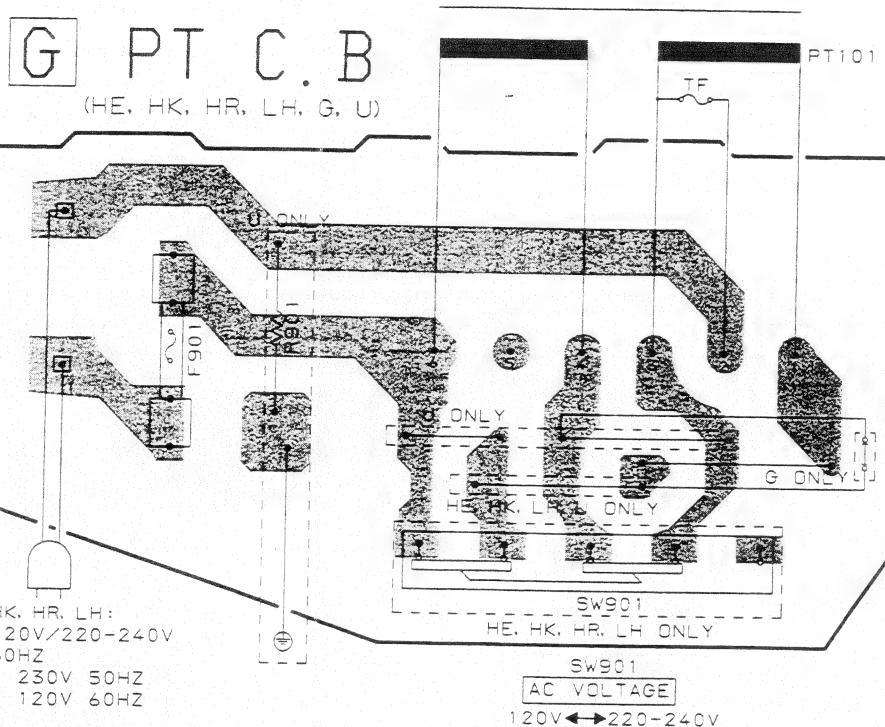
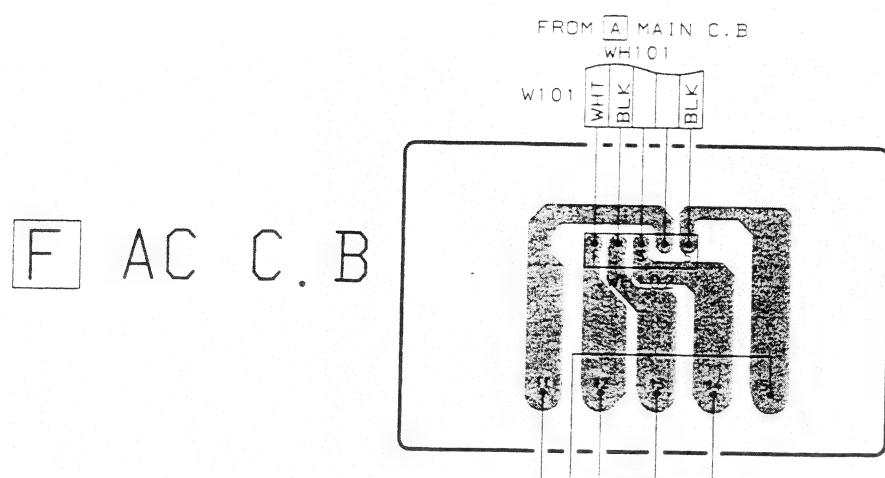


0 PH C. B

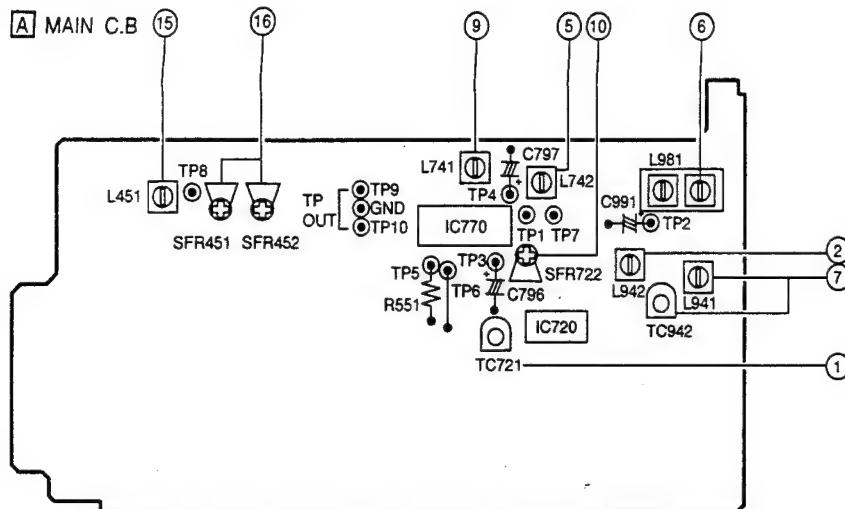


K MOTOR C. B

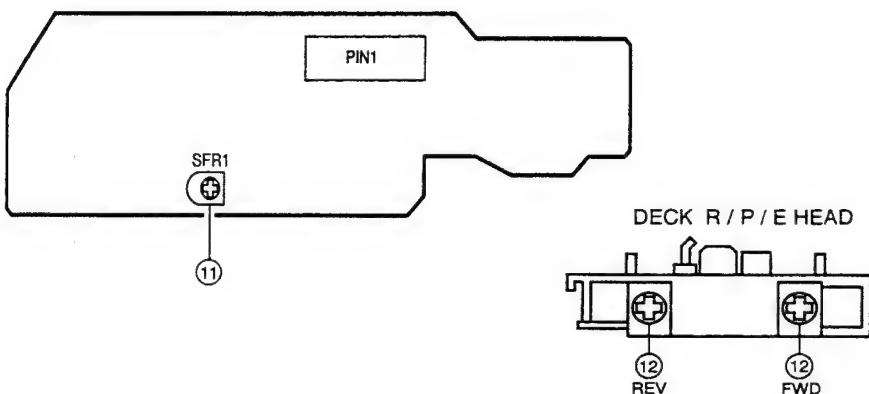
1 2 3 4 5 6 7

A
B
C
D
E
F
G
H
I
J

ADJUSTMENT - 1 < TUNER / DECK >



H DECK C.B



< TUNER SECTION >

1. Clock Frequency Adjustment
 - Settings : • Test point : TP1 (CLK IC770 pin30)
 - Adjustment location : TC721
 Method : Set to MW 1602kHz (HE, HK, HR, G, EE, K, EZ), 1710kHz (LH, U) and adjust TC721 so that the test point becomes $2052\text{kHz} \pm 0.01\text{kHz}$ (HE, HK, HR, G, EE, K, EZ), 2160kHz $\pm 0.01\text{kHz}$ (LH, U).

Settings : • Test point : TP2 (VT)

- Adjustment location : L942

Method : Set to LW 144kHz and adjust L942 so that the test point becomes $1.5V \pm 0.05V$.

3. FM VT Check
 - Settings : • Test point : TP2 (VT)
 - Method : Set to FM 108MHz and check that the test point is $7.0V \pm 1.0V$.
4. MW VT Check
 - Settings : • Test point : TP2 (VT)
 - Method : Set to MW 1602kHz (HE, HK, HR, G, EE, K, EZ), 1710kHz (LH, U) and check that the test point is $6.5V \pm 1.0V$ (HE, HK, HR, G, EE, K, EZ), $7.0V \pm 1.0V$ (LH, U).
5. AM IF Adjustment
 - Settings : • Test point : TP5 (Lch), TP6 (Rch)
 - Method : L742 450kHz

6. MW Tracking Adjustment
 - Settings : • Test point : TP5 (Lch), TP6 (Rch)
 - Adjustment location : L981
 Method : Set to MW 999kHz (HE, HK, HR, G, EE, K, EZ), 1000kHz (LH, U) and adjust L981 so that the test point becomes maximum.

7. LW Tracking Adjustment <EE, K, EZ>
 - Settings : • Test point : TP5 (Lch), TP6 (Rch)
 - Adjustment location : L941 144kHz
TC942 290kHz
 Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

8. FM Sensitivity Check
 - Settings : • Test point : TP5 (Lch), TP6 (Rch)
 - Method : Set to FM 87.5MHz and 108MHz, and check that the test point is $2dB \pm 6dB$ (HE, HK, HR, LH, U, G), $6dB \pm 6dB$ (EE, K, EZ)

9. DC Balance / Mono Distortion Adjustment
 - Settings : • Test point : TP3, TP4 (DC Balance)
TP5, TP6 (Mono Distortion)
 - Adjustment location : L741
 - Input level : 54dB
 Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes $0V \pm 0.04V$. Next, check that the distortion is less than 1.3%.

10. FM Auto Stop Level Adjustment
 - Settings : • Test point : TP7
 - Adjustment location : SFR722
 - Input level : 16dB
 Method : Set to FM 98.0MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) out by 2dB down.

< DECK SECTION >

11. Tape Speed Check
 - Settings : • Test tape : TTA-100
 - Test point : TP OUT
 - Adjustment location : SFR1
 Method : Play back the test tape and check for $3000\text{Hz} \pm 5\text{Hz}$ (FWD) and FWD PLAY speed $\pm 45\text{Hz}$ (REV).

12. Head Azimuth Adjustment
 - Settings : • Test tape : TTA-300
 - Test point : TP OUT
 - Adjustment location : Head azimuth adjustment screw
 Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

13. PB Sensitivity Check
 - Settings : • Test tape : TTA-200
 - Test point : TP OUT

Method : Play back the 400Hz signal of the test tape and check that the test point is within $300\text{mV} \pm 3\text{dB}$.

14. PB Frequency Response Check
 - Settings : • Test tape : TTA-300
 - Test point : TP OUT

Method : Play back the 315Hz and 10kHz signals of the test tape and check that the 10Hz signal with respect to that of the 315Hz signal is within 2dB.

15. Bias OSC Frequency Adjustment

- Settings : • Test tape : TTA-601
- Test point : TP8
- Adjustment location : L451

Method : Set to the REC mode. Adjust L451 so that the frequency at the test point becomes 84kHz to 92kHz.

16. REC/PB Frequency Response Adjustment

- Settings : • Test tape : TTA-602
- Test point : TP OUT
- Input signal : 1kHz / 10kHz (VIDEO/AUX IN)
- Adjustment location : SFR451 (Lch)
SFR452 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP OUT becomes 210mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output level of the 10kHz signal becomes $0\text{dB} \pm 0.5\text{dB}$ with respect to that of the 1kHz.

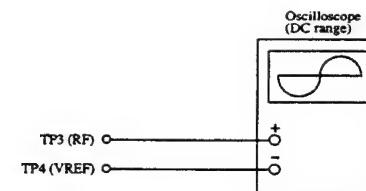
17. REC/PB Sensitivity Check

- Settings : • Test tape : TTA-602
- Test point : TP OUT
- Input signal : 1kHz (VIDEO/AUX IN)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP OUT becomes 21mV. Record and play back the 1kHz signal and check that the output level is $21\text{mV} \pm 3\text{dB}$.

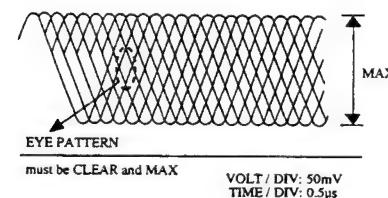
3. Focus Bias Adjustment

Make the focus bias adjustment when replacing and repairing the optical block.



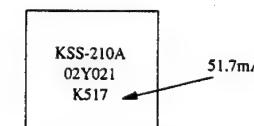
- 1) Connect an oscilloscope to the test points TP3 (RF) and TP4 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
- 4) Adjust SFR1 so that RF signal of the test point TP3 (RF) is MAX and CLEARREST.

RF signal waveform



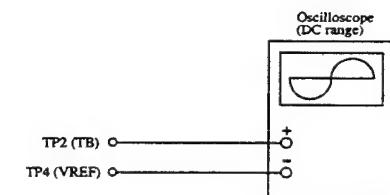
Note:

The current of the laser signal can be checked with the voltages on both sides of R23 (10Ω). The difference for the specified value shown on the level must be within ± 6.0mA.

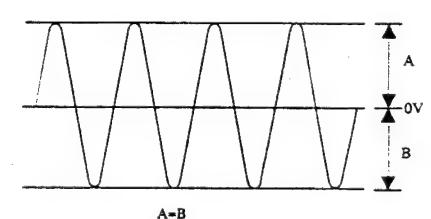


$$\text{Laser current } I_{op} = \frac{\text{Voltage across R23}}{10\Omega}$$

4. Tracking Balance Adjustment



- 1) Connect an oscilloscope to the test points TP2 (TB) and TP4 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (YEDS-18) and press the PLAY button.
- 4) Adjust SFR3 so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
- 5) After the adjustment is completed, remove the connected lead wires from the terminals.



PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	6dB ± 6dB
(THD 3%)	[at 87.5MHz (HE, HK, HR, G, LH, U)]
12dB ± 6dB	[at 87.5MHz (EE, K, EZ)]
4dB ± 6dB	[at 98.0 / 108.0MHz (HE, HK, HR, G, LH, U)]
11dB ± 6dB	[at 98.0 / 108.0MHz (EE, K, EZ)]

S/N 50dB Quieting sensitivity :

30dB ± 5dB
[at 87.5 / 98.0 / 108.0MHz (HE, HK, HR, G, LH, U)]
36dB ± 5dB
[at 87.5 / 98.0 / 108.0MHz (EE, K, EZ)]

Signal to noise ratio :

More than 64dB
[at 98.0MHz (HE, HK, HR, G, LH, U)]

Distortion :

Less than 1.5%
[at 98.0MHz]

Auto stop level :

20dB ± 10dB [at 98.0MHz]
[at 98.0MHz (HE, HK, HR, G, LH, U)]

Stereo separation :

More than 25dB [at 98.0MHz (HE, HK, HR, G, LH, U)]
[at 98.0MHz (EE, K, EZ)]

Intermediate frequency :

10.7MHz

<AM(MW) SECTION>

Sensitivity :	48 ~ 62dB
(S/N 20 dB)	[at 603kHz (HE, HK, HR, EE, K, EZ)]
	[at 620kHz (G, LH, U)]
47 ~ 59dB	[at 999kHz (HE, HR, HK, EE, K, EZ)]
	[at 1000kHz (G, LH, U)]
47 ~ 59dB	[at 1404kHz (HE, HR, HK, EE, K, EZ)]
	[at 1410kHz (G, LH, U)]

Signal to noise ratio :

[at 999kHz (HE, HR, HK, EE, K, EZ)]
[at 1000kHz (G, LH, U)]

Distortion :

Less than 1.5%
[at 999kHz (HE, HR, HK, EE, K, EZ)]

Auto stop level :

55dB ± 10dB
[at 999kHz (HE, HR, HK, EE, K, EZ)]

Intermediate frequency :

1000kHz
[at 1000kHz (G, LH, U)]

<LW SECTION>(EE, K, EZ only)

Sensitivity :	66dB ± 5dB [at 144kHz]
(S/N 20dB)	63dB ± 5dB [at 198kHz]
	62dB ± 5dB [at 290kHz]

Signal to noise ratio :

More than 32dB [at 198kHz]
[at 198kHz]

Distortion :

Less than 1.5% [at 198kHz]
[at 198kHz]

Auto stop level :

60dB ± 10dB
[at 198kHz]

Intermediate frequency :

450kHz
[at 450kHz (G, LH, U)]

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.35% (R.M.S.)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F. & REV torque :	75 ~ 180g-cm
Back tension :	2 ~ 7g-cm (FWD, REV)
PB output level :	2.8V ± 3dB (SP OUT 2V)
REC/PB output level :	2.0V ± 3dB (SP OUT 2V)
Distortion (REC/PB) :	Less than 2.0%
Noise level (PB) :	Less than 110mV (NORM, SP OUT 2V) Less than 80mV (CrO ₂ , SP OUT 2V)
Noise level (REC/PB) :	Less than 30mV/10mV (DIN/WTD, NORM, SP OUT 2V) Less than 20mV/8mV (DIN/WTD, CrO ₂ , SP OUT 2V)
Crosstalk :	More than 60dB (1kHz, OVU)
Channel separation :	More than 40dB (1kHz, OVU)
Erasing ratio :	More than 60dB (at 125Hz)
Test tape :	TTA-602 (NORMAL) TTA-610 (CrO ₂)

TEST MODE

1. How to Activate CD Test Mode

- 1) Insert the AC plug while pressing the function CD button.
- 2) All FL display tubes will light up, and initialization will be started. (Initialize time: approx. 80 seconds)

2. How to cancel CD Test Mode

Either one of the following operations will cancel the CD test mode.

- Press the function button. • Press the power switch button.
- Disconnect the AC plug.

3. CD Test Mode Functions

When test mode is activated, the following mode functions from No. 1 to No. 5 can be used by pressing the operation keys.

Mode / No.	Operation	FL display	Operation	Contents
No. 1	Start mode Test mode activation	All FL light up	• Laser diode illuminated under normal circumstances (CD block power supply ON)	Displays the machine mode that it is a test mode. All FL displays light up • Laser current measurement (Across R29 100 ohms resistor)
No. 2	Search mode ■ key	□□--	• Continual focus search * NOTE 1 (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes.	FOCUS SERVO • Check focus search waveform (OSC1 terminal) • Check focus error waveform (FE1 terminal)
No. 3	Play mode ▶ key	□□/	• Normal playback • Focus search is continued if TOC cannot be read * NOTE 1	FOCUS SERVO / TRACKING SERVO CLV SERVO / SLED SERVO Check FOK (SEL terminal)
No. 4	Traverse mode ■ key	□□/	• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON / OFF Tracking balance (traverse) adjustment
No. 5	Sled mode ◀▶ key	All FL light up	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases, the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.

* NOTE 2: Do not press the ▲◀ or ▶▶ keys when the machine is in the ■ status is active. If they are pressed, playback will not be possible after the ■ status has been canceled. If the ▲◀ or ▶▶ keys are pressed in the ■ status, press the ■ key and return to start mode (No. 1).

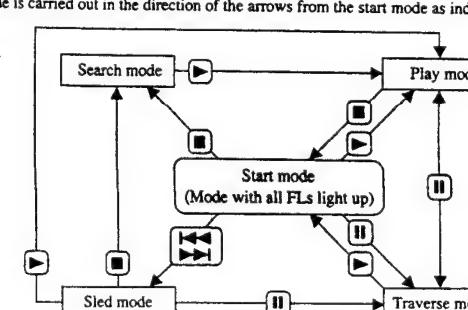
* NOTE 3: When pressing the ▲◀ or ▶▶ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ▲◀ or ▶▶ keys are pressed, even when the pick-up is at the outermost or innermost track.

* NOTE 4: Press the eject key if the CD changer mechanism is jammed while initializing.

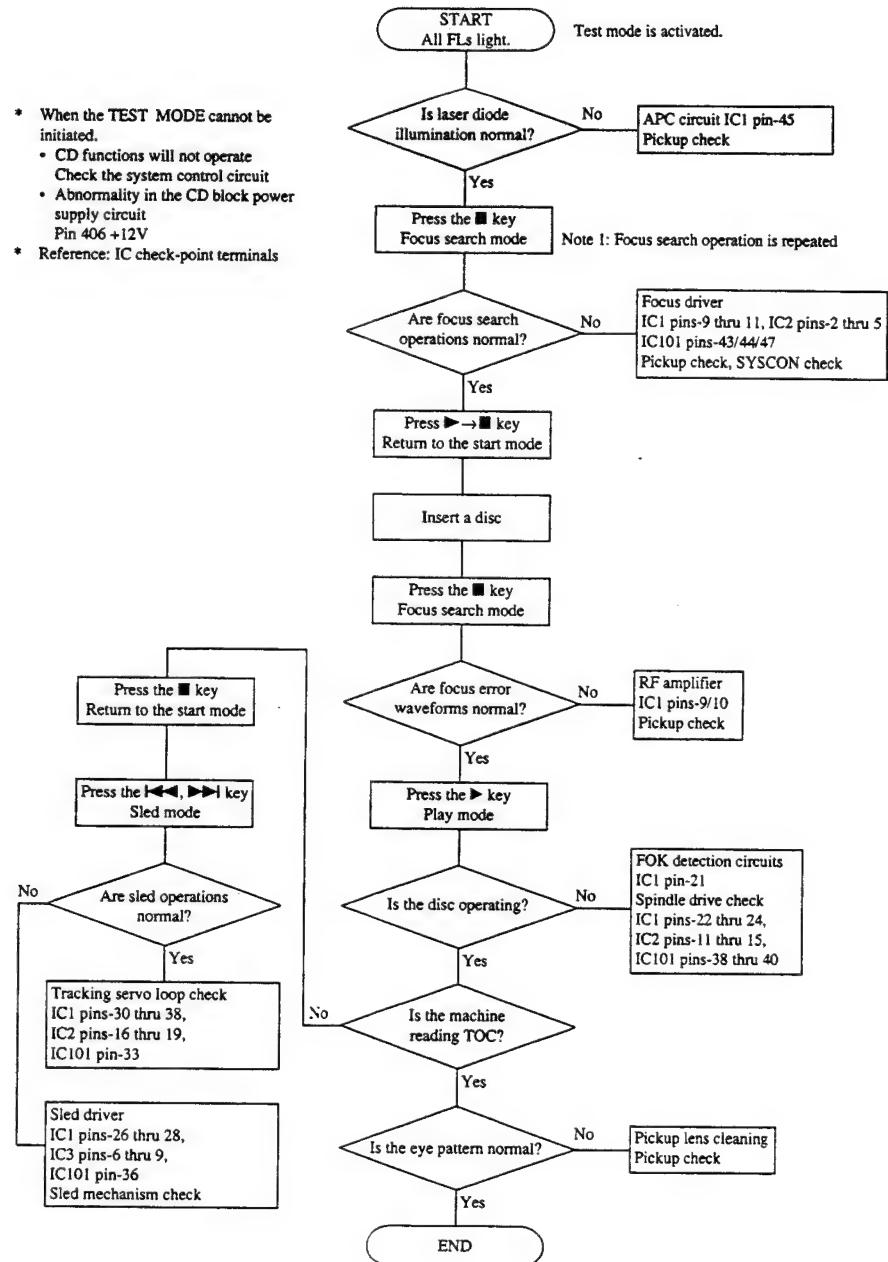
* NOTE 5: Disc cannot be changed during the test mode. (Use the first disc tray)

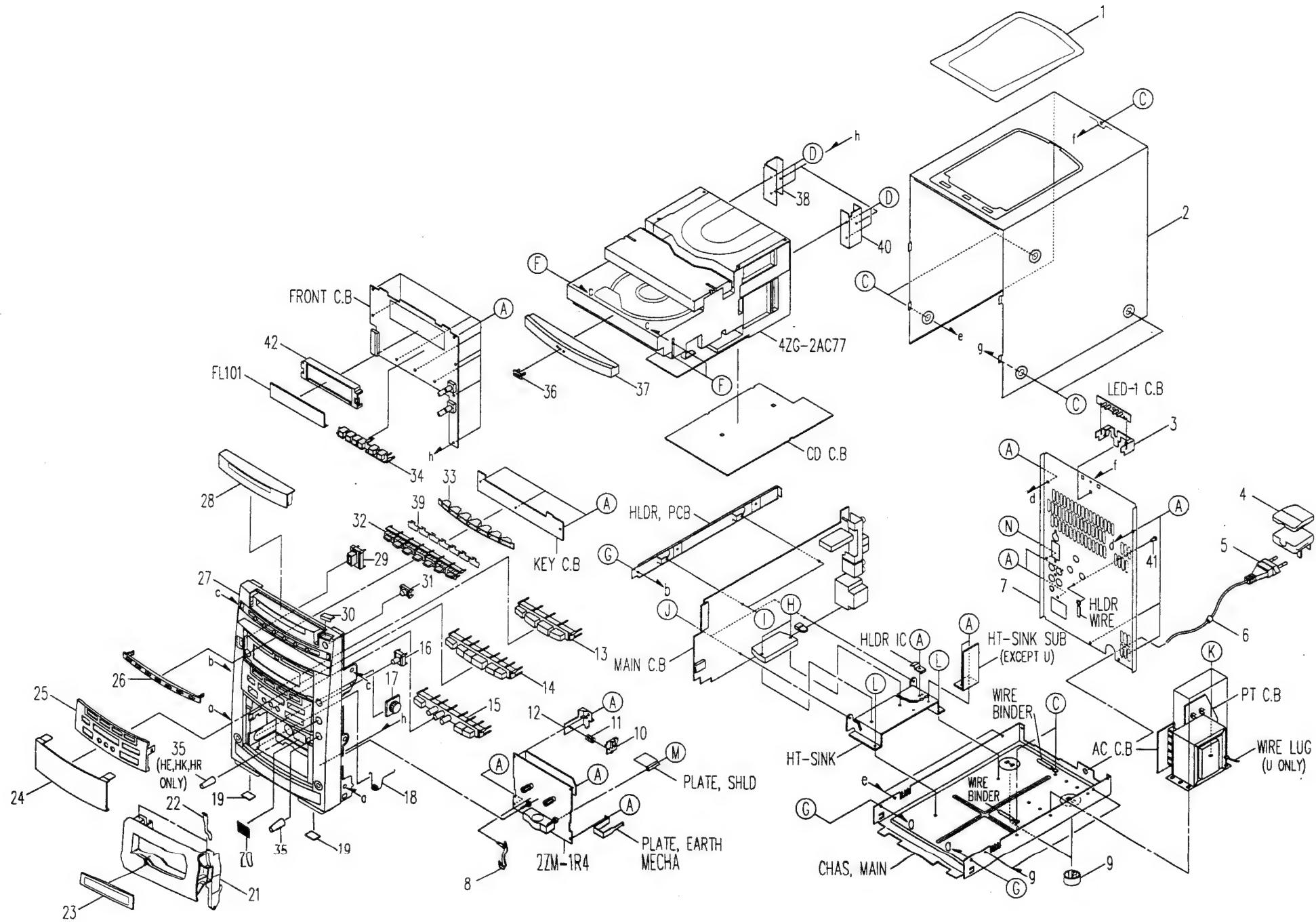
4. Operation Outline

The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



CD TROUBLE-SHOOTING
Flow Chart



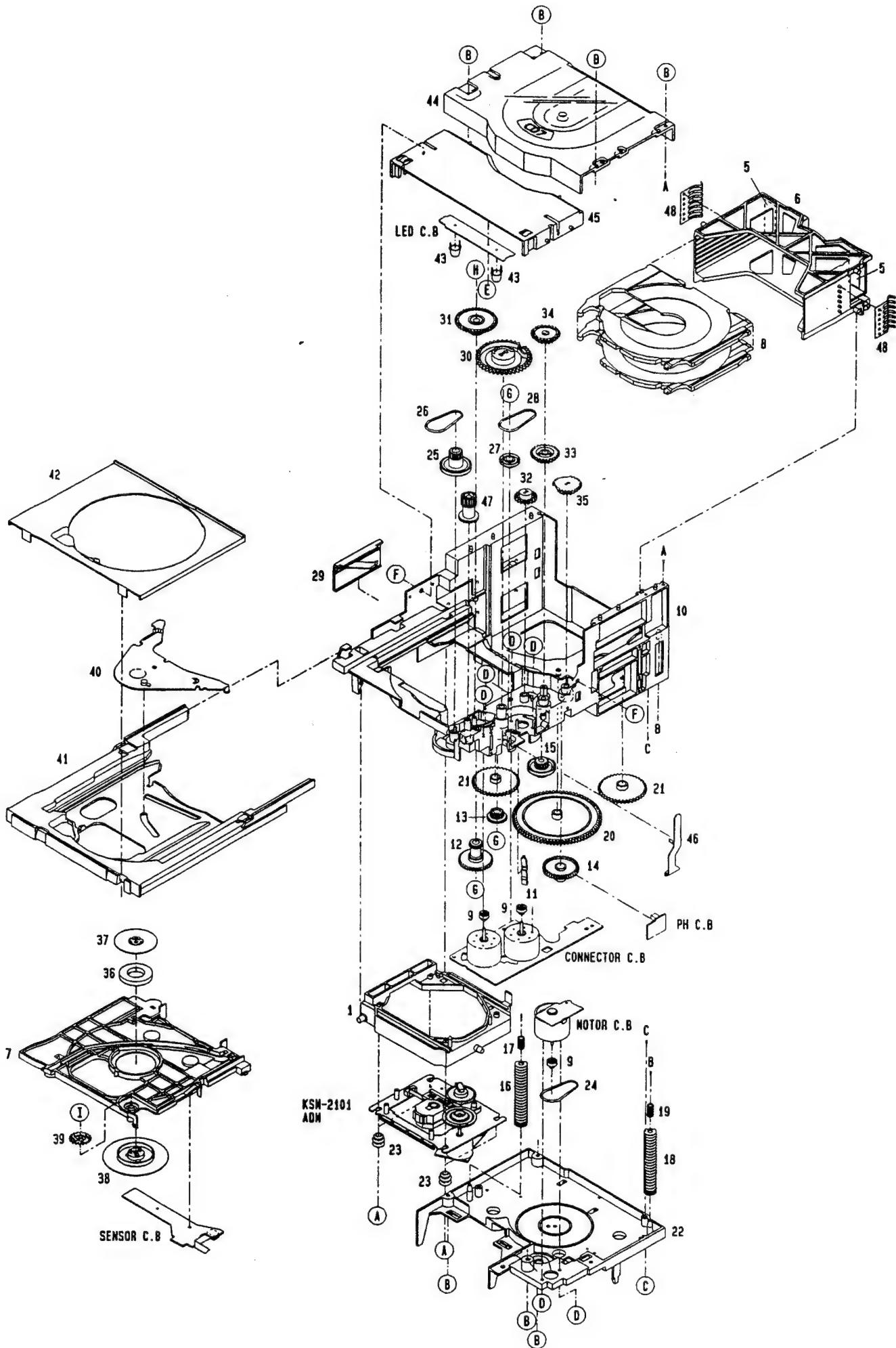


MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	85-CL5-019-019		WINDOW, TOP	24	85-CL5-020-019		WINDOW,DISP
2	85-CL5-002-019		CAB,STEEL	25	85-CL5-024-019		PANEL,FR
3	85-CL5-212-019		HLDR,LED	26	85-CL5-026-019		PANEL,CD
4	87-099-811-018		PLUG,ADPTR CONV(K)<EX>	27	85-CL5-001-119		CAB,FR<K,ES,LH,G,EX>
5	87-050-079-019		AC CORD ASSY,EX<EXCEPT U,K,G>	27	85-CL5-027-119		CAB,FR H<RE,BK,HR>
5	87-050-081-119		AC CORD ASSY,GG>	27	85-CL5-025-119		CAB,FR U<D>
5	87-050-100-019		AC CORD ASSY,K3P<EX>	28	85-CL5-022-019		WINDOW,CD
5	87-050-053-019		AC CORD ASSY,U-2<D>	29	85-CL5-005-019		KEY,POWER
6	87-085-185-010		BUSHING,AC CORD E<EXCEPT U>	30	85-CL5-007-019		KEY,DISC
6	87-085-189-019		BUSHING,AC CORD U<D>	31	85-CL5-006-019		KEY,OPEN
7	85-CL5-031-019		PANEL,REAR EEBN<EE>	32	85-CL5-008-019		KEY,CD
7	85-CL5-033-019		PANEL,REAR EEBN<EZ>	33	85-CL5-205-019		GUIDE,LED CD
7	85-CL5-039-019		PANEL,REAR GBN<G>	34	85-CL5-206-019		GUIDE,LED PLAY
7	85-CL5-037-019		PANEL,REAR HEBN<E>	35	85-CL5-018-019		KNOB,MIC
7	85-CL5-038-019		PANEL,REAR HJBN<HK>	36	82-NF6-067-019		BADGE AIWA 30N
7	85-CL5-052-019		PANEL,REAR HJBN<ER>	37	85-CL5-004-119		PANEL,TRAY
7	85-CL5-035-119		PANEL,REAR KBN<K>	38	85-CL5-209-019		HLDR,CD1
7	85-CL5-036-019		PANEL,REAR LBN<LR>	39	85-CL5-023-019		SH,CD
7	85-CL5-030-019		PANEL,REAR UBN<U>	40	85-CL5-210-019		HLDR,CD2
8	82-ZM1-263-119		LVR,EJECT L	41	87-084-077-019		NYLON RIVET DIA 3.5-4.5
9	81-675-010-010		FOOT,H10	42	82-NF7-210-019		GUIDE,FL
10	82-NF5-229-019		PLATE,LOCK	A	87-067-703-019		BVT 2+3-10 W/O SLOT
11	82-NF5-228-019		SPR-C,LOCK	B	87-751-096-419		VT 2+3-10 GLD
12	82-NF5-226-019		HLDR,LOCK 1N	C	87-067-641-019		UTT 2+3-8 W/O SLOT BLK
13	85-CL5-012-019		KEY ASSY,FUN	D	87-067-579-019		BVT 2+3-8 W/O SLOT
14	85-CL5-010-019		KEY,PLAY	E	87-078-019-019		S-SCREW,L7 4+6
15	85-CL5-009-219		KEY,AMP	F	87-721-097-419		QT 2+3-12 GLD
16	85-CL5-011-019		KEY,KARAOKE	G	87-591-094-419		QT 3-6 GOLD
17	87-063-165-019		OIL-DMPR 150	H	87-067-581-019		UTT 2+3-15 W/O SLOT
18	84-CF3-207-219		SPR-T,EJECT	I	87-078-084-019		BVT 2+3-6 W,CONVEX
19	80-VT1-202-019		FELT,12.5-15.5-2	J	87-067-633-019		BVT 2+3-8 W/CONVEX
20	81-532-080-019		LBL,CASS-COMP7	K	87-751-092-419		VT 2+3-4
21	85-CL5-003-019		BOX,CASS	L	87-067-584-019		BVT 2+3-6 W/O SLOT
22	80-CD3-218-110		SPR-P,CASS	M	87-571-032-419		VT 2+2-3
23	85-CL5-021-019		WINDOW,CASS	N	87-571-092-419		VT 2+3-4

CD MECHANISM EXPLODED VIEW 1/2

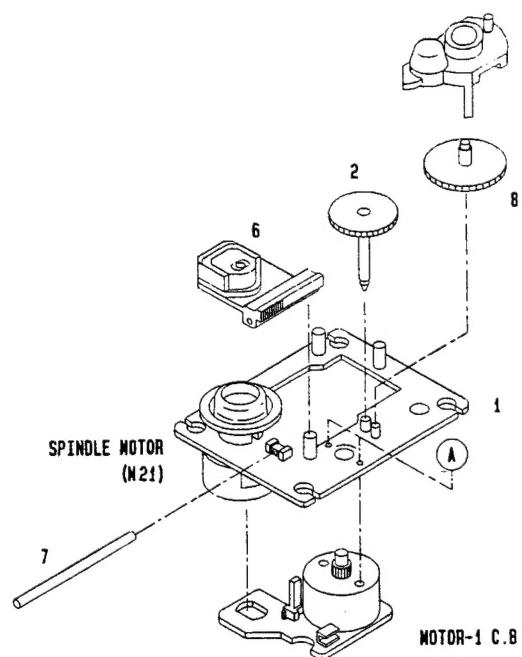


CD MECHANISM PARTS LIST 1/2

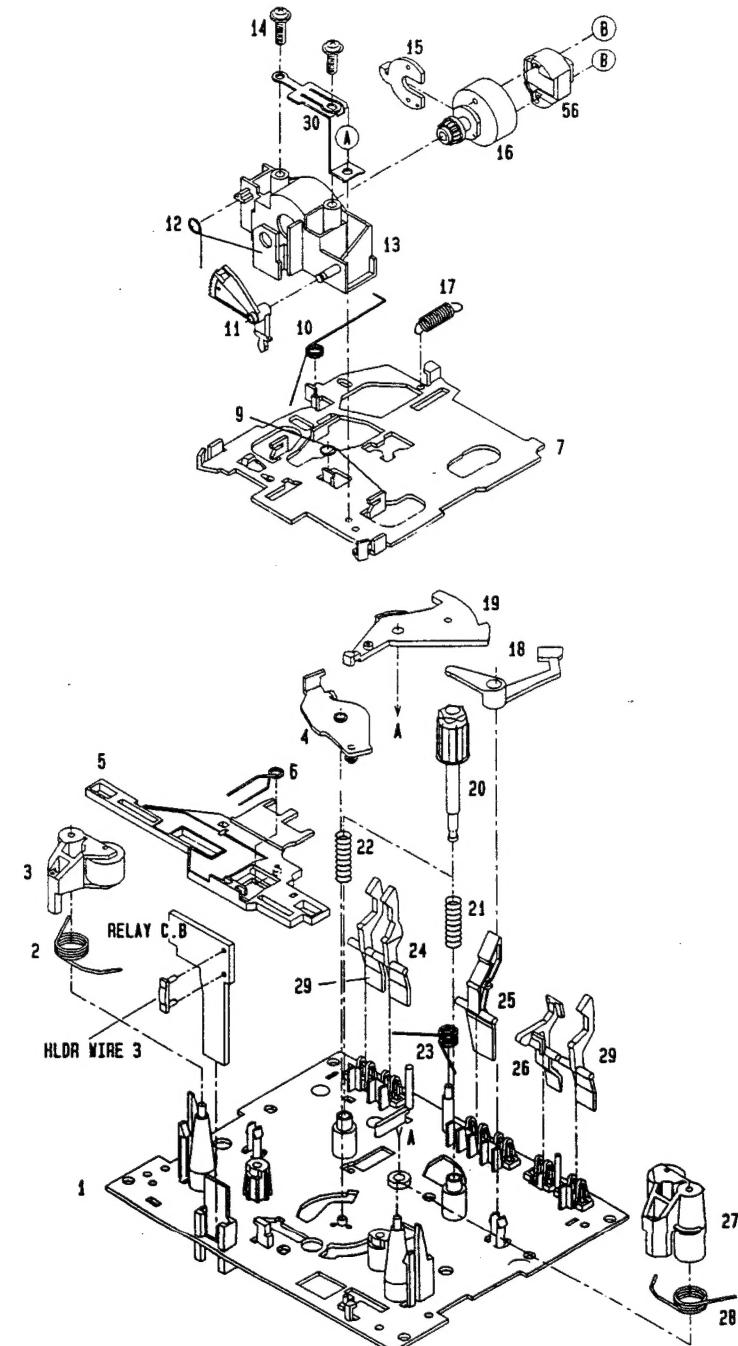
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG2-205-010	HLDR,MECH		34	84-ZG2-217-010	GEAR,MECH-B	
5	84-ZG2-237-010	CLOTH, BOX		35	84-ZG2-216-010	GEAR,MECH-A	
6	84-ZG2-203-010	BOX,TRAY		36	87-036-326-010	MAGNET, CAMPER 93	
7	84-ZG2-204-010	HLDR,MAGNET		37	81-ZG1-229-110	PLATE,MAGNET	
8	84-ZG2-006-010	TRAY,DISC		38	81-ZG1-228-210	HLDR,MAGNET	
9	84-ZG2-228-010	PULLEY,MOT		39	84-ZG2-222-010	GEAR,CAM LOCK	
10	84-ZG2-201-010	CHAS,MECH		40	84-ZG2-003-010	LVR,TRAY	
11	84-ZG2-225-010	LVR,A		41	84-ZG2-001-010	TRAY,L	
12	84-ZG2-213-010	GEAR,TRAY LOAD-B		42	84-ZG2-002-010	TRAY,COVER	
13	84-ZG2-214-010	GEAR,TRAY LOAD-C		43	84-ZG2-240-010	COVER,LED 2	
14	84-ZG2-209-010	GEAR,UP DOWN-B		44	84-ZG2-011-010	COVER,TOP S	
15	84-ZG2-208-010	GEAR,UP DOWN-A		45	84-ZG2-010-010	COVER,LED	
16	84-ZG2-206-010	GEAR,CAM BOX 1		46	84-ZG2-226-010	LVR,B	
17	84-ZG2-238-010	SPR-C,G-BOX 1		47	84-ZG2-212-010	GEAR,TRAY LOAD-A	
18	84-ZG2-207-010	GEAR,CAM BOX 2		48	84-ZG2-232-010	SPR-P,LOCK	
19	84-ZG2-239-010	SPR-C,G-BOX 2		A	81-ZG1-271-010	S-SCREW,MECH REAR	
20	84-ZG2-210-010	GEAR,UP DOWN-C		B	87-067-703-010	BVT2-3-11,(W/O SLOT)	
21	84-ZG2-211-010	GEAR,UP DOWN-D		C	87-067-822-010	BVT 2-3-10(W/O SLOT)	
22	84-ZG2-202-010	CHAS,BOTTOM		D	87-251-071-410	U+2,5-4	
23	80-CD3-214-010	CUSH CD A		E	87-067-584-010	BVT2-3-5	
24	84-ZG2-231-010	BELT,SO-C		F	87-721-097-410	QP2-3-11,GLD	
25	84-ZG2-221-010	GEAR,MECH-F		G	87-067-828-010	VFT2-3-15:1A10,GLD	
26	84-ZG2-229-010	BELT,SO-A		H	87-078-061-010	VFT2-3-10:1A10,GLD	
27	84-ZG2-215-010	GEAR,TRAY LOAD-D		I	87-761-097-410	VFT2-3-12	
28	84-ZG2-230-010	BELT,SO-B					
29	84-ZG2-224-010	CAM,SL					
30	84-ZG2-223-010	GEAR,CAM					
31	84-ZG2-220-010	GEAR,MECH-E					
32	84-ZG2-219-010	GEAR,MECH-D					
33	84-ZG2-218-010	GEAR,MECH-C					

CD MECHANISM EXPLODED VIEW 2/2



TAPE MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 2/2

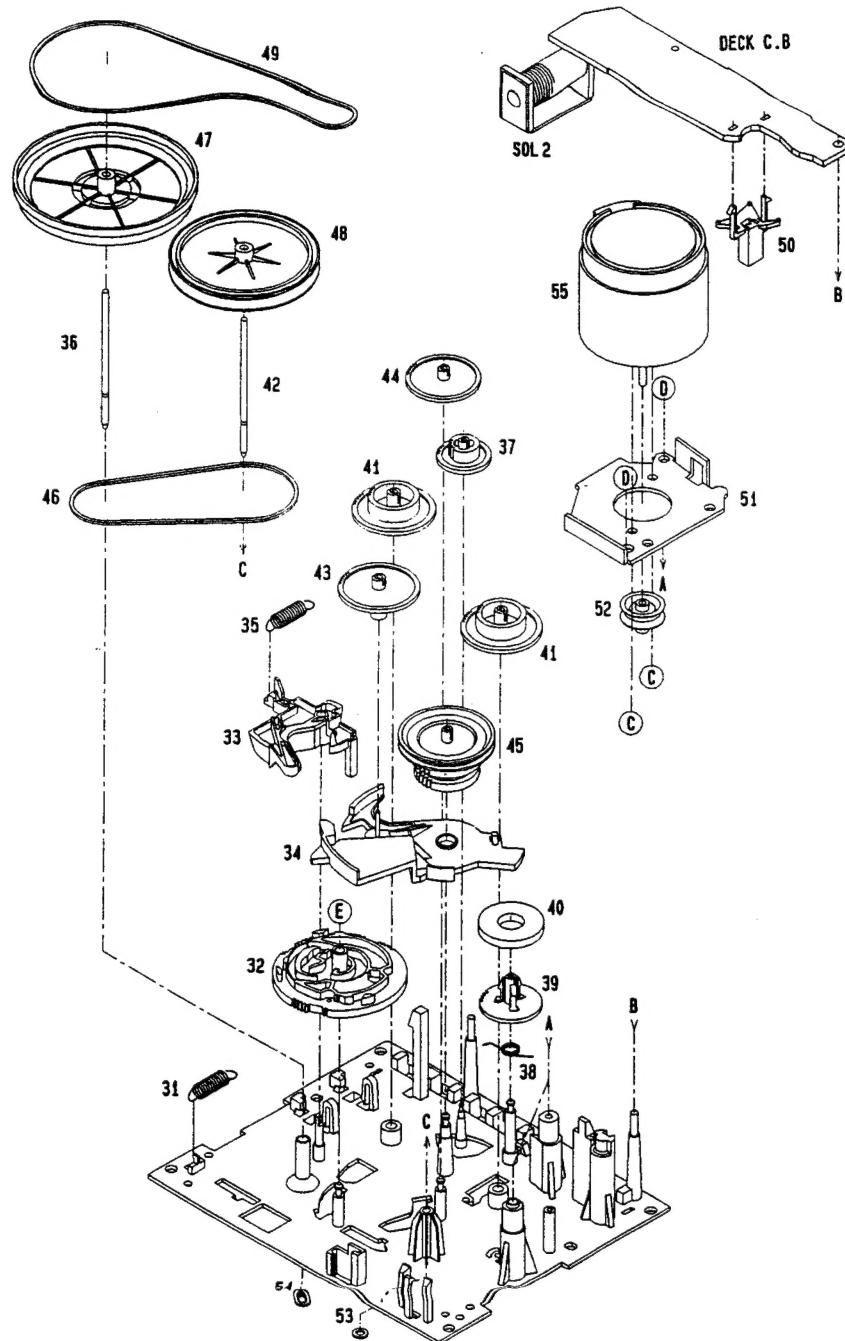
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
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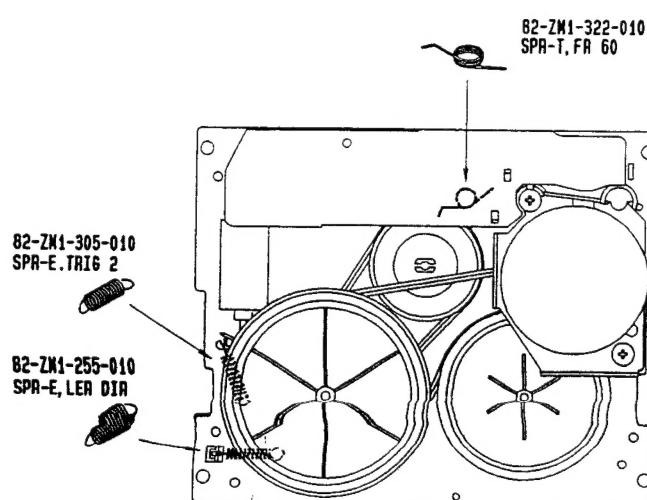
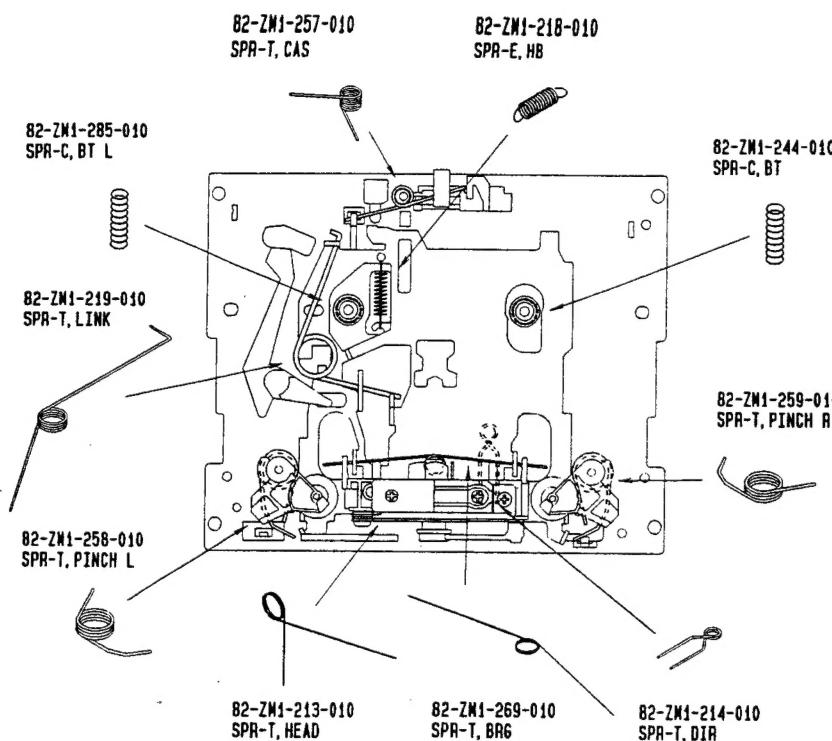
1	9X-262-587-110		MOTOR CHASSIS ASSY
2	92-625-188-020		GEAR(A)
3	92-625-544-010		COVER
6	98-848-127-110		OPTICAL PICK UP KSS-210A
7	92-626-908-010		SHAFT SLED
8	92-626-081-010		GEAR B
A	87-261-032-210		V+2-3

TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

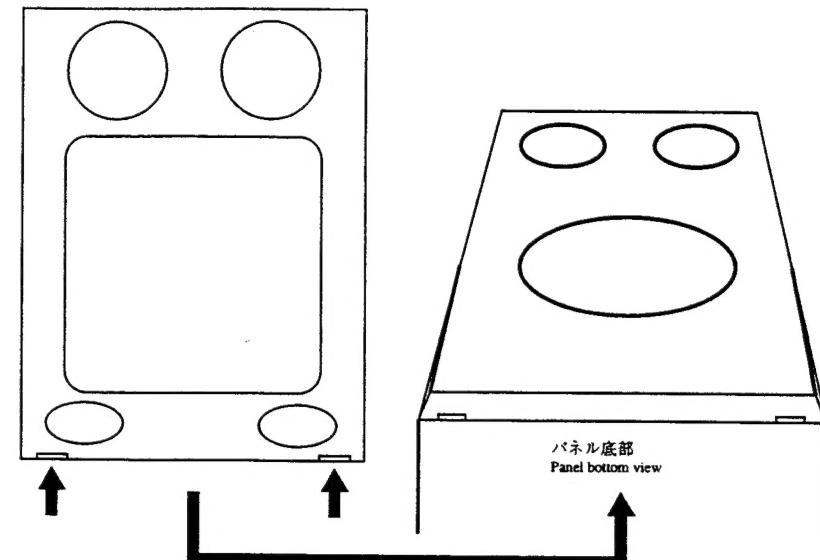


SPRING APPLICATION POSITION



SPEAKER DISASSEMBLY INSTRUCTIONS

矢印の位置にマイナスドライバーを差し込んで、パネルをはずして、各々のスピーカー・ユニットのビスを取り、スピーカー・ユニットをはずしてください。
Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel.
Remove the screws of each speaker unit and then remove the speaker units.



SPEAKER PARTS LIST (SX-SL700)

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	85-CP5-014-010		SPEAKER GRILL R	6	85-CP5-604-010		SPEAKER TWEETER
2	85-CP5-015-010		SPEAKER GRILL L	7	85-CP5-606-010		CERAMIC
3	85-CP5-019-010		GRILL FRAME ASSY R	8	85-CP5-611-010		SPEAKER CORD Y/B
4	85-CP5-020-010		GRILL FRAME ASSY L	9	83-096-614-010		SPEAKER CORD
5	85-CP6-602-010		SPEAKER WOOFER				

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	85-CFS-652-019	RC,RC-T515	
2	85-CFS-902-119	IB,ESC(S)<EXCEPT U>	
2	85-CFS-903-119	IB,GFI(S)<EE,EE>	
2	85-CFS-905-119	IB,U-ESF(S)<D>	
3	87-043-115-018	ANT,FEEDER FM<EXCEPT K,EE,EE>	
3	87-043-106-019	FM WIRE ANT(Z)<EE,EE>	
4	87-006-225-019	AM LOOP ANT MC2	
5	87-099-789-019	PLUG,ADPTR IR44<LE,HE,HE>	

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-CHIP	CAP, CHIP
C-CAP	CAP, CHIP TANTALUM
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	TERMINATOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESIV	ADHESIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL